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Artículos científicos

**Influencia de la educación y de la dinámica familiar en mujeres
microempresarias de General Escobedo, México**

*Influence of education and family dynamics on women
microentrepreneurs in General Escobedo, Mexico*

*Influência da educação e da dinâmica familiar em mulheres
microempreendedoras em General Escobedo, México*

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Resumen

El aumento de la participación de las mujeres en el trabajo fuera del hogar y su creciente matrícula escolar representan cambios sociales que han transformado radicalmente las sociedades desde la segunda mitad del siglo XX hasta la actualidad. El objetivo de este artículo es analizar algunas características individuales y familiares de mujeres microempresarias y de los negocios que dirigen con respecto a su nivel educativo. Para ello, se aplicó un cuestionario durante el primer trimestre de 2022 en el municipio de General Escobedo, en el estado de Nuevo León, México. Con la información recopilada, se realizó



un análisis descriptivo de las características de las mujeres microempresarias y, además, se llevó a cabo un análisis de varianza de un factor (Anova) para observar las diferencias entre los tipos de negocios.

Entre los principales resultados se identifica que la mayoría de las participantes (54 %) tiene estudios universitarios. Además, la mayor parte de sus negocios se encuentra en establecimientos fijos, los cuales tienen mayores utilidades y son desempeñados por mujeres de mayor edad. Por otro lado, los negocios que se llevan a cabo en domicilios propios o en internet son ejercidos principalmente por las mujeres más jóvenes, lo cual se considera un elemento importante ya que la flexibilidad en los horarios les permite desempeñar actividades de cuidado. De acuerdo con los resultados obtenidos, el nivel educativo no tiene un impacto significativo en el momento en que las mujeres deciden iniciar un micronegocio, lo cual difiere de lo que se pensaba según otros estudios, donde se esperaba que el nivel educativo les permitiera tener un mayor conocimiento sobre cómo desempeñar adecuadamente las actividades empresariales.

Palabras clave: educación de la mujer, participación de la mujer, condiciones de vida, familia.

Abstract

The increased participation of women in the workforce and their growing enrollment in schools have brought about significant social changes since the second half of the 20th century. This article aims to examine individual and family characteristics of women who are micro-entrepreneurs and the businesses they manage in relation to their level of education. The study was conducted in the municipality of General Escobedo in the state of Nuevo León, Mexico during the first quarter of 2022 through a questionnaire. Descriptive analysis was used to analyze the characteristics of the women micro-entrepreneurs, and a one-way analysis of variance (ANOVA) was used to observe differences between types of businesses.

The majority of the participants (54%) have completed university studies, and most of their businesses are located in fixed establishments, which tend to have higher profits and are run by older women. However, younger women are more likely to operate businesses from their own homes or online due to the flexibility of their schedules, which allows them to engage in caregiving activities. The study found that the level of education does not have a significant

impact on the decision to start a micro-business, which contrasts with the expectations of previous studies that suggest a higher level of education would provide greater knowledge about proper business practices.

Keywords: women's education; women's participation; living conditions; family.

Resumo

O aumento da participação das mulheres no trabalho extradoméstico e o aumento das matrículas escolares representam mudanças sociais que transformaram radicalmente as sociedades desde a segunda metade do século XX até hoje. Este artigo tem como objetivo analisar algumas características individuais e familiares de mulheres microempendedoras e dos negócios que dirigem no que diz respeito à sua formação. Para isso, foi aplicado um questionário durante o primeiro trimestre de 2022, no município de General Escobedo, no estado de Nuevo León, México. Com as informações coletadas, foi realizada uma análise descritiva das características das mulheres microempendedoras; Da mesma forma, foi realizada uma análise de variância de um fator (Anova) para observar as diferenças entre os tipos de negócios. Dentre os principais resultados, identifica-se que a maioria dos participantes (54%) possui formação universitária; Além disso, a maioria de seus negócios encontra-se em estabelecimentos fixos, sendo estes os que têm os maiores lucros e, além disso, são realizados por mulheres mais velhas, enquanto os negócios realizados em suas próprias casas ou na Internet são realizados principalmente pelos mais novos, o que é considerado um elemento importante, pois a flexibilidade de horários permite que eles realizem atividades de cuidado. De acordo com os resultados obtidos, o nível não tem impacto quando as mulheres decidem iniciar um micronegócio, quando segundo outros estudos, pensava-se que lhes permitiria ter mais conhecimento sobre a forma adequada de realizar as atividades.

Palavras-chave: educação de mulheres; participação das mulheres; condições de vida; família.

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Introduction

During the 20th century, economic, social and technological changes have modified the existing relationship between the labor, social and family market, which transcends the limit of the labor division by gender approach and marks a new relationship between work and dynamics. familiar. This fact generates a multiplicity of roles that can enhance or limit the professional and personal performance of women who have this double responsibility (Álvarez and Gómez, 2011).

Historically, the employment relationship has functioned as a traditionalist model in which the man is the provider and the woman is the caretaker of the home. However, Aguirre and Martínez (2006) point out that over time this model has changed, since the incorporation of women into the labor market and the income they receive has led them to take on a productive role, but at the same time maintain the reproductive role in the home.

In this sense, Marín et al. (2002) establish that work and family dynamics are two important aspects for the personal and social development of people. For their part, Geurts et al. (2005) define the concept of work-family interaction as a process in which the behavior of a worker in a domain (for example, at home) is influenced by certain ideas and situations (positive or negative) that have been built or lived in another domain (for example, at work).

On the other hand, Abarca (2007) and Sztompka (1995) establish that the growth experienced in recent years in the educational level has been one of the factors by which women decide to participate in the labor market. Other factors have been the need to have more income within the home, as well as social changes such as globalization, technological growth, economic and financial crises, as well as environmental changes.

In turn, Andrades et al. (2019) point out that in the last decade the empowerment of women through their participation in the labor market has been a key factor in economic and social growth in the countries, and the entrepreneurship of microenterprises.¹ it has great potential to empower this segment of the population. However, the triple shift of women, linked to the traditional roles that have been assigned to them by society, leads to certain

¹ According to Rivero et al. (2001) a microbusiness is "a small socioeconomic unit of production, trade or provision of services, whose creation does not require much capital and due to its size there is a productive and efficient use of resources (p. 41). According to Alvarado (2021) and Alvarado et al. (2021), nano- and micro-businesses are economic units composed mainly of a non-salaried individual employer who performs business, professional, or economic activities under his or her own name without being subject to an employment contract.

conflicts within the home, since formal work is not part of the main responsibilities they should perform (Cavazos , 2014).

Based on the above, this study aims to find out what sociodemographic characteristics² influence women to make the decision to start a microbusiness and what differences their businesses present based on some of these characteristics. Based on this question, hypotheses are not considered since the study is descriptive. However, the objective of this research is to analyze the education, family dynamics, and other sociodemographic aspects of women who start a microbusiness in the municipality of General Escobedo, in the state of Nuevo León, Mexico.

In order to achieve the aforementioned objective and answer the question posed, a survey was applied to 50 participants with questions related to their work, home and degree of studies, during the second quarter of 2022, in the referred municipality. The analysis of the information obtained in the survey consisted of identifying the individual and family characteristics of the women microentrepreneurs. In addition, a variance analysis (Anova) was applied to determine if there is a significant difference between microentrepreneurs who have a fixed establishment and those who offer their products or services online.

The work is organized in this way: in the following section a brief bibliographical review on the economic participation of women and the associated factors is presented, in order to verify if they influence the decision to start a business. Section three describes the methodology and data collection. Section four presents the results and, finally, some conclusions of the study and future lines of research are offered.

Contextual framework

Education and some elements that influence the economic participation of women

In recent decades, there have been important changes in the configuration of family life. Some of the most relevant aspects have been the postponement of the age of marriage and the birth of children. These changes are fundamentally related to the social role of women, particularly in socioeconomic development, since their economic contribution to the household is currently very important (Forest et al., 1995). Another relevant factor in these

² Sociodemographic factors include the characteristics of the participants, such as their age, marital status, level of schooling, head of household, children, place of work, among others.

changes has been access to the educational system, which has brought a link to the labor market in better conditions (Buchmann and Diprete, 2004) and, at the same time, has improved the quality of life by increasing income, maintain more stable relationships and have greater control over family size (Diprete and Buchmann, 2006).

Thus, at the international level, gender gaps in the education system have been reversed, which has benefited women (Buchmann and Diprete, 2004). This is due to a series of situations that have arisen in society, such as demographic changes linked to the delay in fertility among women, the distribution of activities in the family environment, the reduction in labor discrimination and the need for cover work and family issues, especially in the cases of young women who continue their educational and work trajectories without sacrificing one stage for the other (Lancrin, 2008). In addition, another positive aspect that refers to the academic results and skills of women is the higher educational level of the parents (Buchmann and Diprete, 2004).

For some authors, the most important decisions that people make become visible in the course of a few years, which are called years of transition to adult life. This process supposes four situations or transitions that are very common in the state of people: finishing the educational system, obtaining a job, starting a family and having children (Hostetler et al., 2007). These transitions acquire greater intensity in women's decision-making on other scenarios that are also relevant (Jacobs and King, 2002), especially considering that there are still activities that are related to traditional gender roles and that require more time. and different resources for men and women.

Some authors, such as Becker et al. (1959, 1964, 1974, cited in Harmon et al., 2000), in their theory of human capital, show education as an investment of current resources, which includes the opportunity cost of the time involved, as well as the direct costs to change in future returns. Therefore, continuing in the educational system is a great opportunity for women (Bradburn et al., 1995). In fact, according to the European studies mentioned above, women have a greater possibility of economic return for educational achievements compared to men (Harmon et al., 2000).

In a study carried out by Salas (2018) on labor participation, the author explains the relationship between education and salary through labor trajectories, which shows that this link generates a higher quality in employment, and even that within the gaps gender, higher education is a factor that is associated with the creation of better conditions to achieve greater gender equality and improve wage differences over time.

In this sense, Guzmán et al. (2000) analyze the changes experienced by the labor trajectories of three generations of Chilean women. In their analysis, the authors study the working life, permanence and mobility of women. In this sense, they determine that the family factors that impact on said trajectories are the age of entry into the labor market, the delegation of domestic tasks, the distribution of care among family members, as well as the number of children and if these are of care age, or their level of schooling and their marital status.

This is how labor discrimination by sex continues to exist and can be defined as the concentration of women within a small number of occupations, since most of the opportunities are offered to men, which results in male primacy in management positions. high responsibility or higher rank within organizations (Cuadrado and Morales, 2007).

In this sense, according to Castaño (1999), the incorporation of women into the labor market has been related to the reduction in fertility and the increase in the supply of child care. In addition, the remuneration of women will depend on their educational preparation to increase their job opportunities, as well as the decrease in the number of children.

Women employers or micro-entrepreneurs

Various studies indicate that an important issue to consider is the search for greater independence by women, regardless of their age, marital status or educational level. In a work carried out by Malone et al. (2010) suggest that women want greater economic independence as a result of unstable financial situations in the past, therefore, they look for opportunities to start businesses that ensure long-term income.

According to the previously mentioned study, older women have more education and, in turn, higher incomes. At the same time, they are more concerned about their current and future financial situation, which gives them more possibilities to seek greater economic independence and, thus, decide to start a micro-enterprise.

On the other hand, a study carried out by Navarro (2016) concludes that expanded access to higher education for women is an essential tool for the development of skills and competencies that not only contribute to combating gender inequalities, but also to generate self-confidence and provide them with the ability to assess their environment, which allows them to choose to start a micro-enterprise.

In relation to the above, a study conducted by Briseño et al. (2016) analyzes the case of three women microentrepreneurs in the state of Tamaulipas, Mexico, in order to find out the reasons why they decided to start their own business. In one of these cases, the woman had postgraduate studies and the main reasons for starting the business were the need to have more income, increase her assets, have greater independence and be able to participate in decision-making within the home. In another case, the woman had university studies and the main reason for starting a business was dissatisfaction with her field of work. Finally, in the third case, a woman with technical studies, the lack of activity after her retirement was her main motivation to start a business, since housework was not enough as the only activity and obtaining an additional income gave her the opportunity for greater independence. In accordance with the above, it can be deduced that, regardless of the level of studies, women can start a micro-enterprise.

There are also other sociodemographic characteristics —such as age, marital status, and work experience— that play a very important role in starting and continuing a microbusiness. While it is true that higher educational levels increase the possibility of finding a stable job or having the foundations to have an effective business plan, work experience can consolidate managerial skills that allow the success of a business. In addition, for women who start a business at an older age, this feature allows them to have more experience in applying business plans (Dvouletý et al., 2018).

Likewise, regarding the marital status of women, whether they are married or in a union with a partner, and those who are older, they are generally more focused on the opportunity to continue with the operations of their businesses with the idea of generating a patrimony that, with the passing of the years, will grow and they will be able to inherit their families (Alvarado *et al.*, 2018).

Analysis of the characteristics of women employers and their economic participation in Nuevo León and Mexico

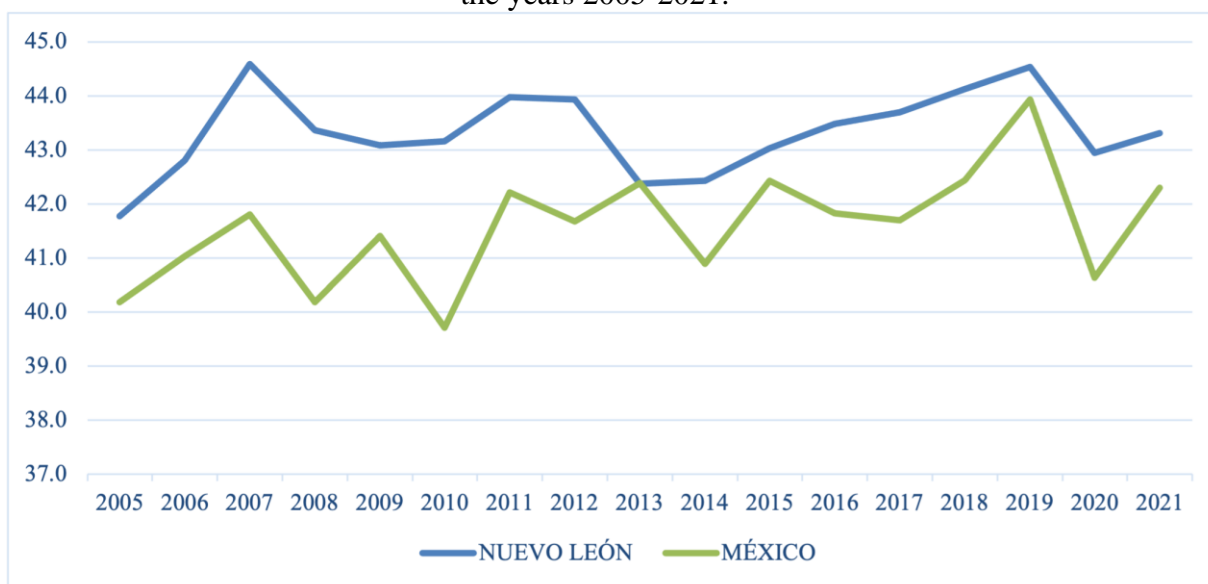
In Mexico, throughout the last two decades, various investigations have been carried out that have studied the changes that have occurred in gender roles in the labor market and in the functioning of families. These studies have indicated that there are multiple transformations in people's lives as a result of social and cultural changes (Rojas, 2016).

During the 1990s, significant differences were observed in the number of women who decided to participate economically and seek employment compared to those who decided to

dedicate themselves exclusively to housework. Although the number of women entering the job market has increased over time, the idea that women are the main heads of the home still persists. This causes a double workload as they have to dedicate themselves to both household chores and extra-domestic work, which generates inequity, few opportunities, violence, among other problems (Moctezuma et al., 2014). To understand changes in women's economic participation, it is necessary to understand the various responsibilities they face.

Figure 1 summarizes the changes that have occurred at the national and state level in terms of women's economic participation. In the case of Mexico, it can be seen that the lowest participation rate was registered in 2010, with 39.7%, while the highest rate was in 2019, with 43.9%. At the national level, there have been decreases in participation, but it has recovered in the following years. In the case of Nuevo León, the highest rate was in 2007, with 44.6%, followed by 44.5% in 2019, while the lowest rate was in 2005, with 41.8%. In addition, in 2013 there was a decrease of 1.5 percentage points at the state level, which has been recovering steadily from 2014 to 2019.

Figure 1. Comparative analysis of women's employment in Nuevo León and Mexico for the years 2005-2021.



Source: own elaboration based on the fourth quarter of each year of the National Occupation and Employment Survey (Encuesta Nacional de Ocupación y Empleo, ENOE) (Instituto Nacional de Estadística y Geografía [Inegi], 2021).

The following table compares subordinate and independent jobs for the year 2020 (table 1). According to the jobs performed by women, at the national level, 73.94% are

subordinates, while 26.06% are independent. In the case of Nuevo León, these figures are 80.88% and 19.12%, respectively. Salaried women have an important participation in the labor market, and there is a difference of 10.22 percentage points in the participation in said jobs between Mexico and Nuevo León, with a higher percentage of participation at the state level when compared to the national level.

On the other hand, in independent jobs, the percentage of participation at the national level is higher, with a difference of 6.94 percentage points compared to the state of Nuevo León. The participation of women in jobs as employers and self-employed at the national level is also greater, with only 0.06 and 6.87 percentage points of difference with respect to Nuevo León, which is relevant because it indicates that independent jobs are increasing throughout the country.

Table 1. Economic participation rates by position in economic activity of women in 2020.

	México	Nuevo León
POSITION	(%)	(%)
Self-employed workers	26.06	19.12
Employers	2.46	2.40
Self-employed workers	23.60	16.73
Subordinate workers	73.94	80.88
Salaried employees	66.34	76.56
With non-wage payments	1.84	0.74
Unpaid family workers	5.49	3.22
Non-family workers without pay	0.27	0.35
TOTAL	100.00	100.00

Source: own elaboration according to the average obtained from the four quarters of 2020 with information from the ENOE (Inegi, 2020).

With regard to women who work independently as employers in Mexico and Nuevo León, most of them have a secondary education level (with 34% and 51%, respectively), followed by those with an educational level upper average or higher (with 31.29%) and 35.55% for the state of Nuevo León (table 2). As mentioned, women have obtained great benefits by reaching higher educational levels and having better professional development. For example, the possibility of accessing professional jobs, as well as more opportunities for better paid jobs and greater professional growth within organizations. (Ariza y Oliveira, 2001).

Table 2. Participation rates of female employers by educational attainment in 2020

	México	Nuevo León
EDUCATIONAL LEVEL	(%)	(%)
Incomplete elementary school	15.49	3.22
Primary complete	19.24	9.93
Secondary	33.93	51.15
High school and above	31.29	35.55
Not specified	0.05	0.15
TOTAL	100.00	100.00

Source: own elaboration according to the average obtained from the four quarters of 2020 with information from the ENOE (Inegi, 2020).

With regard to participation in independent work, it is observed that the majority of married women are the ones that occupy the highest percentage, with 42% in the case of Mexico and 47% in the case of Nuevo León, followed by women single and in free union, both at the national and state level, with 19% and 17% for Mexico, and 18% and 14% for Nuevo León (table 3).

Table 3. Participation rates of women employers by marital status in 2020

	México	Nuevo León
MARITAL STATUS	(%)	(%)
Single	19.63	18.24
Married	42.47	47.78
Unmarried	17.17	14.40
Separated	8.17	4.24
Divorced	3.29	8.14
Widowed	9.27	7.21
Not specified	0.00	0.00
TOTAL	100.00	100.00

Source: own elaboration according to the average obtained from the four quarters of 2020 with information from the ENOE (Inegi, 2020).

Regarding age, it is found that the women with the highest participation in the labor market are in the range of 20 to 49 years, where the percentage concentration is greater than 70%, both for Mexico and for Nuevo León. After the age of 50, the percentages begin to decrease.

Table 4. Participation rates of female employers by age in 2020

	México	Nuevo León
AGE	(%)	(%)
15 to 19 years old	4.55	4.23
20 to 29 years old	22.01	23.12
30 to 39 years old	24.51	22.44
40 to 49 years old	24.25	26.58
50 to 59 years old	16.61	16.83
60 years and over	8.00	6.60
Not specified	0.06	0.20
TOTAL	100.00	100.00

Source: own elaboration according to the average obtained from the four quarters of 2020 with information from the ENOE (Inegi, 2020).

In relation to the number of children, those women who have one to two children present the highest percentage of participation, with 40.44% at the national level and 38.37% at the state level, followed by those who do not have children, with 27.0 % and 31.74 %, respectively. It is worth mentioning that women who have between three and five children also present an important participation, with more than 28.0% in both cases.

Table 5. Participation rates of female employers by number of children by 2020

	México	Nuevo León
NUMBER OF CHILDREN	(%)	(%)
No children	27.01	31.74
1 to 2 children	40.44	38.37
3 to 5 children	28.69	28.03
6 and more children	3.86	1.82
Not specified	0.01	0.04
TOTAL	100.00	100.00

Source: own elaboration according to the average obtained from the four quarters of 2020 with information from the ENOE (Inegi, 2020).

Methodology

To investigate how education and other sociodemographic characteristics influence the entrepreneurial power of women, a 28-question questionnaire divided into two blocks was designed. The first focused on the general sociodemographic characteristics of the women microentrepreneurs (age, marital status, education, number of children, and economic sector) and on the characteristics of their businesses (operation time, location, financing, and

income), while the The second focused on family dynamics and the main reasons and problems that women face due to their economic participation (self-confidence, respect and entrepreneurship).

It is important to determine if self-confidence, respect and entrepreneurship also influence women when starting a business, especially since women who have their own businesses often have these characteristics. The entrepreneurship characteristic will support the evaluation of aspects such as the type of financing obtained, the reasons for starting the business, the current income of the business, the age and type of establishment, among others.

A non-probabilistic snowball and intentional sampling was carried out, supported by the Kimakul program of the University of Monterrey.³, located in the state of Nuevo León. Women who work as micro-entrepreneurs were sought out and, thanks to the association, they were contacted, which generated greater confidence for their participation in the study. Once a participant was contacted and the questionnaire was applied, she was asked to recommend a colleague with the same type of venture (preferably).

In this study, a group of women with micro-businesses in the municipality of General Escobedo, Mexico, were evaluated. During the first quarter of 2022, a survey was applied and 50 questionnaires were collected. The information obtained was treated by identifying the individual and family characteristics of the women microentrepreneurs. In addition, an analysis of variance (Anova) of a factor was carried out to compare groups of microentrepreneurs who sell or offer their products or services in a fixed establishment, at home or through the Internet. The objective of this statistical analysis was to determine if there are significant differences between the types of business in the sample of microentrepreneurs in Escobedo, Nuevo León.

Finally, the R software, version 4.2.1, was used to generate word clouds that allowed for a graphical analysis of the frequency with which the women mentioned specific expressions or words during the gathering of information related to the three dimensions that make up the open questions from the second block of the instrument (self-confidence, respect and entrepreneurship). This analysis made it possible to identify patterns and trends in the responses of women microentrepreneurs regarding their perception of these dimensions.

³ The Kimakul basic skills training program of the University of Monterrey seeks to economically empower women in vulnerable situations as a factor in the prevention of violence.

Results

Individual and family characteristics of women microentrepreneurs

Table 6 shows that the majority of those surveyed indicated that they were between 36 and 45 years old, followed by those between 26 and 35 years of age. Likewise, it can be seen that most of the participants indicated having university studies (54.0%), being married (62.0%), having between one and two children (60.0%) and not considering themselves the head of the household (74.0%). Regarding the age of their businesses, 32% indicated that they were less than three years old, while the sector where they operate the most is the commerce and services sector.

Table 6. General characteristics of the microentrepreneurs

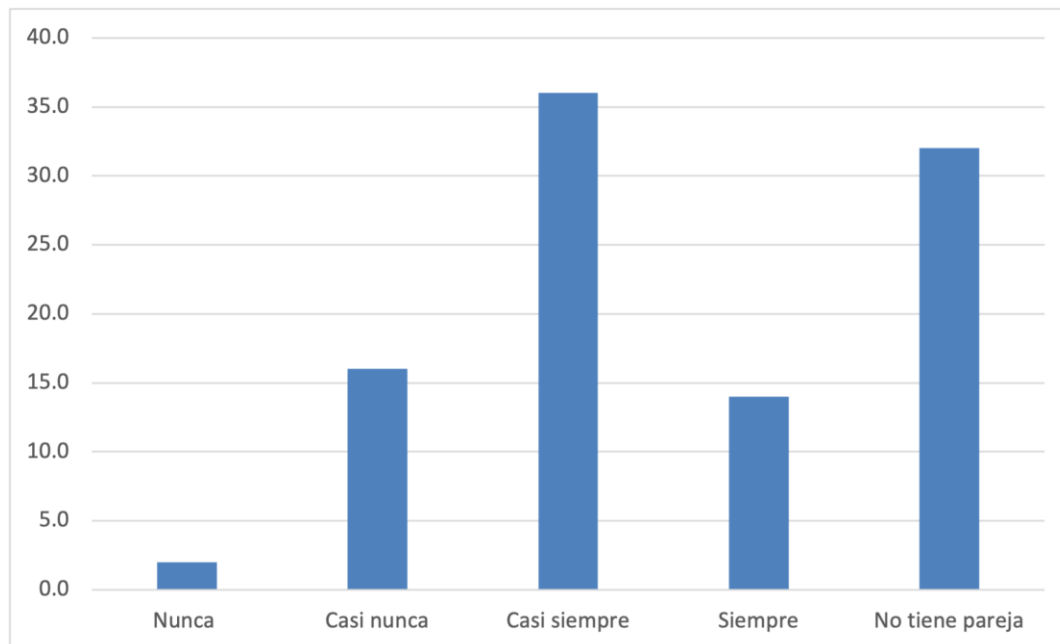
Component		Total	
		Frequency	%
Age	Under 25 years old	5	10.0
	From 26 to 35 years old	18	36.0
	From 36 to 45 years old	19	38.0
	More than 46 years old	8	16.0
	Total	50	100.0
Status Marital Status	Single	9	18.0
	Married	31	62.0
	Divorced	5	10.0
	Unmarried	3	6.0
	Widowed	2	4.0
	Total	50	100.0
Schooling	High school	3	6.0
	High school	8	16.0
	Technical	5	10.0
	University studies	27	54.0
	Postgraduate	7	14.0
	Total	50	100.0
Children	1 to 2 children	30	60.0
	3 to 4 children	7	14.0
	No children	13	26.0
	Total	50	100.0
Head of household	Yes	13	26.0
	No	37	74.0
	Total	50	100.0

	Less than 3 years	16	32.0
	4 to 5 years	10	20.0
	6 to 10 years	10	20.0
	More than 11 years old	14	28.0
	Total	50	100.0
Sector	Commerce	24	48.0
	Industry	2	4.0
	Services	24	48.0
	Total	50	100.0

Source: own elaboration

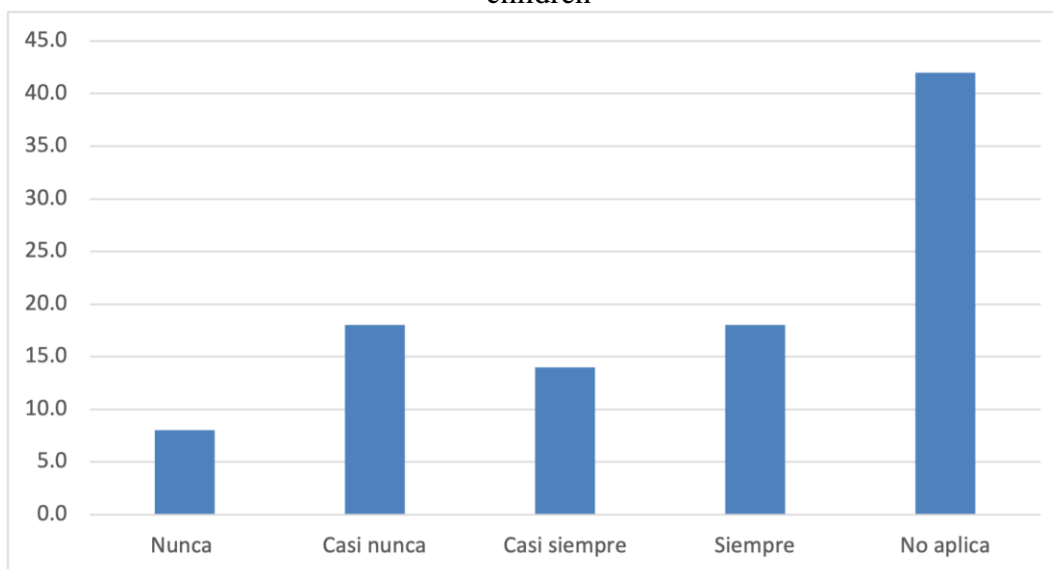
When investigating some aspects related to the family life of women microentrepreneurs, it was found that those who have a partner have their support in carrying out housework in a high percentage of cases, either almost always or always (figure 2). However, in caring for children, although there is a significant percentage of couples who always participate in this work, it is also noteworthy that an equal percentage has less participation (figure 3).

Figure 2. Frequency with which women have their partner's support in carrying out domestic activities.



Source: own elaboration

Figure 3. Frequency with which women have the support of their partner in the care of children



Source: own elaboration

In this study, it stands out that 64.0% of the women microentrepreneurs mentioned having the freedom to manage the family income, which has been indicated in other studies as an indicator of female autonomy. (García y Oliveira, 2006).

Microentrepreneurs and their businesses

Regarding the businesses that these women run, it is observed that most of them indicate that their main motivation for working independently was that it was their "only way of obtaining income", followed by having a "flexible schedule to be able to attend children and home", while the motivation of less importance was that "the jobs they found were poorly paid" (table 7).

Table 7. Motives for starting a microbusiness

Concept	Frequency	Percentage
Family tradition	3	6.0
Supplement family income	8	16.0
Only way to earn income	14	28.0
Flexible schedule to be able to care for children and home	9	18.0
To pursue a trade, career or profession	4	8.0
The jobs you found were low paying	2	4.0
Hobby	4	8.0
Self-improvement	6	12.0
Total	50	100.0

Source: own elaboration

Regarding the form of financing of women who work in microbusinesses, the participants report that they started their operations or ventures using personal savings in 56.0% of the cases, followed by loans from friends or relatives and the liquidation of previous jobs in a 18.0%. However, 38% of the respondents indicate that the entrepreneurial effort is worth it because, on average, their earnings are ten thousand pesos per month (table 8).

Table 8. Financing and earnings of women microentrepreneurs

Concept	Frequency	Percentage
Financing		
Loans from friends or relatives	9	18.0
Personal savings	28	56.0
Sale, mortgage or pawn of your assets	1	2.0
Liquidation of previous employment	9	18.0
Inherited business	3	6.0
Total	50	100.0
Earnings		
Less than 2 500 pesos	7	14.0
Between 2,501 to 5,000 pesos	13	26.0
Between 5 001 to 7 000 pesos	5	10.0
Between 7 001 to 10 000 pesos	6	12.0
More than 10,000 pesos	19	38.0
Total	50	100.0

Source: own elaboration

On the other hand, an aspect little explored in studies on microentrepreneurs is the differences between the type of business they run, considering some of their individual and family characteristics. As mentioned in the methodology section, a one-factor analysis of variance (Anova) was carried out to compare the groups of women microentrepreneurs who sell or offer their products or services in a fixed establishment, at home or through the Internet, based on the quantification of significant differences in means for the sample collected from microentrepreneurs in General Escobedo, Nuevo León.

In accordance with the above, Table 9 shows the Anova estimates for the variables of earnings, age, seniority and education. This table shows that for the variable of profits or profits of women who have micro-businesses, there is a significant difference between those who have a fixed establishment and those who offer their products or services online. The difference is, on average, 9832 pesos per month in favor of microentrepreneurs with a fixed establishment compared to those who offer online.

Table 9. Analysis of Variance

Variable			Difference between means (I-J)	Standard error	Sig.
Earnings	Internet	Fixed establishment	-9832.550*	2078.396	.000
		Home address	-1303.786	3281.847	.917
	Fixed establishment	Internet	9832.550*	2078.396	.000
		Home address	8528.765*	3438.962	.043
	Home address	Internet	1303.786	3281.847	.917
		Fixed establishment	-8528.765*	3438.962	.043
Age	Internet	Fixed establishment	-8.809*	2.717	.006
		Home address	-3.750	4.290	.659
	Fixed establishment	Internet	8.809*	2.717	.006
		Home address	5.059	4.496	.504
	Home address	Internet	3.750	4.290	.659
		Fixed establishment	-5.059	4.496	.504
Seniority	Internet	Fixed establishment	-6.176*	1.745	.003
		Home address	-1.200	2.755	.901
	Fixed establishment	Internet	6.176*	1.745	.003
		Home address	4.976	2.887	.207
	Home address	Internet	1.200	2.755	.901
		Fixed establishment	-4.976	2.887	.207
Education	Internet	Fixed establishment	-.002	.794	1.000
		Home address	.021	1.254	1.000
	Fixed establishment	Internet	.002	.794	1.000
		Home address	.024	1.314	1.000
	Home address	Internet	-.021	1.254	1.000
		Fixed establishment	-.024	1.314	1.000

* Mean difference is significant at the .05 level.

Source: own elaboration

In the same way, it can be observed that in comparison with the microentrepreneurs who offer their products or services at home, those who have a fixed establishment show statistically significant results. In other words, there is an average difference of 8,528 pesos in favor of microentrepreneurs with a fixed establishment. However, when it comes to women who have micro-businesses managed at home compared to those who sell or offer online, there is no statistical evidence to make an inference.

Regarding the age variable, it can be seen that the only significant difference that exists is between the groups of microentrepreneurs who have a fixed establishment and those who offer their products or services online. Women who work in a fixed establishment, on average, are 8.8 years older than those who work from internet portals. In the same way, it is observed that women who have a fixed establishment, on average, have 6.1 more years in the market compared to those who offer through the Internet.

Regarding the education variable, there is no statistical relevance in the sample collected for these groups of women who work in microbusinesses.⁴ However, if we analyze Table 10, we can appreciate the average value of each of the groups of women employers. However, since it is a small sample, it is observed that with respect to said variable, the groups have the same years of schooling, on average, which is why it does not turn out to be statistically significant.

In relation to earnings, it can be observed that microentrepreneurs with fixed establishments are the ones who obtain the highest income with an approximate average of 16,000 pesos. These establishments are operated by women older than 10 years and with an average age of 43 years. In contrast, for businesses managed in their own homes, the average earnings are 7,500 pesos and the age is almost half that of fixed establishments. The women who operate these businesses have an average age of 38 years. On the other hand, for online businesses, earnings are 6,200 pesos on average. The women who operate them are generally younger, with an average age of 34 years, and the seniority is less, with an average duration of 4 years.

⁴ Since no significant evidence was found for the education variable, it was decided to perform the Kruskal-Wallis H-test, since all the women microentrepreneurs have a similar level of education, indicating that there is an influence. Pérez (2005) points out that the H test is a nonparametric test based on the range that can be used to corroborate whether there are statistically relevant differences between two or more groups of an independent variable in an ordinal or continuous dependent variable. Thus, the exercise is carried out with the same variables and it is found as evidence that there is a difference between the average ranks between the education of women working in microbusinesses (sig. ≤ 0.031).

Table 10. Mean value of the Anova variables

	Earnings	Age	Antiquity	Education
Own domicile	7540.00	38.00	5.20	14.80
Fixed establishment	16080.76	43.06	10.18	14.82
Internet	6236.21	34.25	4.00	14.82

Source: own elaboration

Finally, with respect to the results obtained through the R software, version 4.2.1, the codes assigned to the dimensions of self-confidence, respect and entrepreneurship have been identified, which are related to the economic participation of the women microentrepreneurs who were part of the of the sample. Therefore, the word clouds allow us to graphically analyze the frequency with which the participants mentioned a specific expression or word for each dimension. The font size indicates the frequency of responses, that is, a large font shows a greater number of mentions.

Self-confidence dimension

Figure 4 highlights in particular the word self-esteem, which underscores the importance that women have when performing the role of micro-entrepreneurs in the municipality of Escobedo, Nuevo León. Among the phrases, testimonies were found indicating that having studies (technical or university) increases the "equality" and "empowerment" of women in the labor and commercial market.

Figure 4. Word cloud of *self-confidence*



Source: own elaboration

Respect dimension

Another of the dimensions of interest that was included in the measurement instrument refers to the "respect" that the fact of being a trained woman and micro-entrepreneur can generate in relation to her family dynamics. Figure 5 shows that women who have studies and a business were the most mentioned by their families (mainly by their children). Likewise, the words sustenance and decision stand out, since by having a job related to their studies, women gain respect in their family dynamics for their contribution.

Figure 5. Word cloud of *respect*



Source: own elaboration

Entrepreneurship dimension

The word cloud of the entrepreneurship dimension presents a central focus on the word income, which stands out as the main incentive for women to undertake activities related to their studies. In addition, income is closely linked to the term self-employment, given that by being women owners or micro-entrepreneurs and working on their own account, they achieve a better self-sustenance capacity for both themselves and their families.

Figure 6. Word cloud of *entrepreneurship*

Source: own elaboration

Discussion

According to the results of this research on the general sociodemographic characteristics of women, it is observed that the majority of the participants have university studies, with 54%, and an average age between 36 and 45 years, being in the age range in which, according to Jacobs and King (2002), women have greater transitions and their decisions are more relevant. In addition, it is identified that most of them are married (with 62%), only 26% are heads of family and 16% have businesses less than three years old, with 96% in the trade and services sector.

It is important to highlight that although most of the women have a high level of schooling, many of them consider their micro-business as the only way to obtain income, followed by those who need to have more flexible hours for their family and, finally, to avoid low-paying jobs. According to Guzman et al. (2000), these are some of the situations that negatively affect the labor participation of women.

Authors such as Crittenden (2014, cited by Kawash, 2015) point out that women reduce their economic participation when they become mothers, mainly due to maternity and care conditions, which constitutes one of the causes of their absence or inactivity during said period. . If we consider that most of the women who participated in this research are married, do not receive income due to lack of flexible hours and low-paid jobs, this confirms the results of the study.

Another interesting aspect is financing; In this sense, most women do it with personal savings, loans from friends or relatives, or with the liquidation of their previous job. According to a study carried out by Saavedra et al. (2020), women tend to resort to financing

from family or friends rather than bank financing, and they are unaware of government and private organizations that can support them in economic terms. Given that many of the participants (38%) receive a monthly income of ten thousand pesos and are in the age range where they are most useful, perhaps for these women it is worth investing in a micro-business, especially for the majority who they started with personal savings and are not committed to debt.

Regarding the results of the study, it is observed that, according to the analysis of the Anova test, the profits of micro-businesses with a fixed establishment are significantly higher than those managed at home or through the Internet. In addition, it is evident that these establishments are mostly owned by older women. In this sense, it is possible that younger women prefer to use Internet applications and social networks to carry out their businesses, since it provides them with greater comfort and flexibility. This fact is related to the research carried out by Goyal (2001), who points out that the use of the Internet in the business environment is particularly attractive for women, since it allows them greater flexibility in terms of time and work, as well as the possibility of earn additional income.

Regarding the educational factor, no significant differences were observed between the participating women in terms of their level of education. This is probably because most have similar educational levels. However, in future studies it would be pertinent to analyze the relationship between schooling and the type of employment performed by women with different educational levels in microbusinesses, since studies such as those by Wainerman (2003), Bradburn et al. (1995) and Navarro (2016) suggest that the educational level does have an impact on the economic participation of women.

Therefore, it is interesting to delve into how education really influences independent work, both self-employed and employers. Although it is true that, according to studies such as that of Ocañas (2019), wage gaps also exist in the formal labor sector and are related to low levels of schooling in women, it is necessary to examine in greater detail how this factor influences in wage income in the field of microbusinesses. Likewise, the study carried out by Huacho and Rosales (2019) indicates that the educational level is one of the factors that affects the differences in income.

Conclusions

According to the results obtained from the one-factor Anova test and the Kruskal-Wallis H test, significant evidence was found in the study variables (business age, women's age, earned earnings, and educational level) at the time of starting a business. The education variable was significant only in the H test, which indicates that, although the women in the sample have similar educational levels, there is a significant influence of those women who have completed their studies compared to those who have not.

Regarding the criteria linked to family dynamics, it was generally observed that married women with small children opt for jobs with greater flexibility to be able to care for their children and spend time with their partner, with independent work being a good option. In addition, technological tools support the advertising and promotion of their activities, especially for younger women who are more familiar with the use of these platforms. Finally, it was observed that those women who have older children have even more freedom and can dedicate more time to their work activities in person.

Future lines of research

This research demonstrates the need to continue analyzing the educational level of women microentrepreneurs, considering a larger sample that allows evaluating the differences in terms of educational level. In addition, it must be determined what other aspects make it possible to quantify the family dynamics of women, in order to know the role they play in housework and childcare, according to their educational level and economic activity.

In this sense, for future work it is recommended to expand the analysis sample, not only for the municipality of General Escobedo, but also for other municipalities in the state of Nuevo León, or consider its metropolitan area as part of the study. Married women or women with a partner could also be observed in comparison with single women, those with children and those without, and even according to age ranges or type of business, to identify their differences.

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