

ANALYSIS OF MAIN LOCAL DEVELOPMENT INDICATORS IN PETROVA COMMUNE, MARAMUREȘ COUNTY

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Abstract: Analyzing the major statistical data regarding Petrova commune is a first step to understand the systemic problems the community faces, but also the opportunities it has to develop. The analysis aims at the demographic dimension, the establishment of new people in the commune, the departures of the inhabitants of the commune, the natural increase, education, health, through which it is desired to highlight the main trends regarding the situation of these indicators. Knowledge of the current situation of the commune is what generates the directions in which the commune of Petrova must develop. The analysis of local indicators can lead to find the best development directions, which, once implemented, will change the lives of the residents of Petrova commune for the better.

Key words: Petrova, demography, natural increase, education, health

INTRODUCTION

The commune of Petrova is located in Maramureș County, it had a documentary attestation only in 1411, although the unwritten historical springs discovered on the territory of the locality date back to approximately 3-4 thousand years ago, which confirms the existence of a community in that area since Antiquity.[18]

The commune of Petrova is located in the north of Romania, located on the left bank of the Vișeu River, approximately 12 km from its confluence with the Tisa River, 100 km by road from Baia Mare, the seat of Maramureș County, 35 km from Sighetu-Marmatiei, the former capital of historical Maramureș and 24 km from the town of Vișeu de Sus.[8, 14]

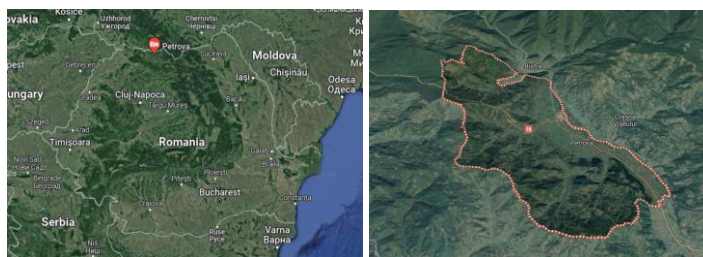


Figure 1. The location of the commune of Petrova on the territory of Romania (satellite view)

Source: Processing after [https://www.google.com/maps/search/comuna+petrova+harta/\[10\]](https://www.google.com/maps/search/comuna+petrova+harta/[10])

The commune of Petrova is located in the Maramureș Depression, in the area of the high hills, known in their entirety as Culmea Vișeuului or Maramureșului Hills. The terrain is varied, due to the presence of the meadow and the terraces of the Vișeu river. Petrova is also surrounded by mountain slopes, such as Vârful Arșitai (892 m) to the north and Vârful Gorui (739 m) to the south.[15]

The neighborhoods of Petrova are: to the North – East, the Bistra commune; to the South – East Leordina commune; to the South - West Strâmtura commune; to the West, the commune of Bârsana and the commune of Rona de Sus.[9]

The etymology of the name Petrova comes from the anthroponym Petru with the suffix -ova. The first documentary attestation of the locality mentions the name as Petrowa, but later maps, shown in the figures below, name the locality as it is today, Petrova. [12]



Figure 2. Petrova commune in the Iosefina map of Maramureș County (1782-1785)

Source: Processing after https://ro.wikipedia.org/wiki/Ridicarea_topografica_iozefina [19]

As can be seen in Figure 2, Petrova is right on the border of the Austro-Hungarian Empire during the period when it occupied a good part of Transylvania.

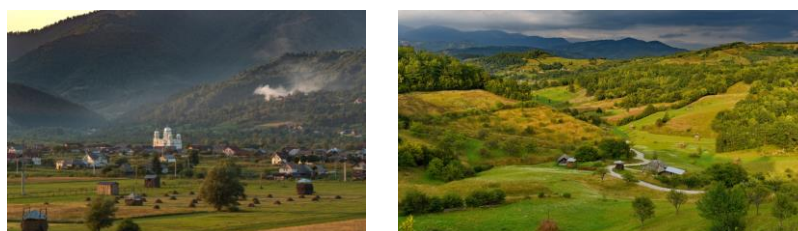


Figure 3. Petrova Commune, Maramureș County

Source: Personal archive of the authors

Within Maramureș county, Petrova commune is identified as a medium developed locality, according to the IDSL (Social Development Index of localities), occupying the 34th place out of 64 analyzed localities. Currently, Petrova is in a development process, to which both the administrative authorities and the population of the area contribute.[11]

MATERIALS AND METHODS

For achieve this paper, the authors used different study methods. A detailed study of the analyzed locality was necessary. Having access to the municipality's library, we were able to analyze the local indicators very easily. In addition to access to library, we had access to the commune's development strategy and various reports made available by the town hall, which were very detailed and well structured. Specialized literature and various scientific works also came to support us. The extracted informations were centralized, analyzed and represented under various figures or tables and at the end we managed to draw some conclusions. [2, 4, 20]

RESEARCH RESULTS

Petrova must develop as a European commune, with quality standards related to each key area: infrastructure, industry, agriculture, public and commercial services, human resources, social assistance, education, health, citizen safety, etc., but also to integrate and to actively mobilize the existing potential at the regional level.[8]

The commune of Petrova must thus establish itself as a local actor, exploiting this potential in parallel with the initiation, support and materialization of action and investment initiatives, which will attract public and private sources in its development.[13]

Before presenting the situation regarding the evolution of the commune's population, it is necessary to clarify the concept of population. As can be seen in the statistical sheet of each locality, the population data are presented for the legal population

and the stable population. The legal population is the one residing in the analyzed administrative unit.[1, 5]

The evolution over time of the population of Petrova commune shows various oscillations from one decade to another. Tables 1 and 2 show the evolution of the population over time in the studied commune. Thanks to the information from the commune's archive, we were able to realize a wider evolution of the inhabitants starting with the year 1880 until the year 2022.

Table 1.

The evolution of the inhabitants in Petrova between 1880-1992

	1880	1890	1900	1910	1920	1930	1941	1956	1966	1977	1992
Number of inhabitants	2311	3061	3350	4229	4704	4274	4734	3303	3038	3312	2956

Source: Authors processing according to received data from Primaria Petrova, <http://statistici.insse.ro>[15,20]

Table 2.

The evolution of the inhabitants in Petrova between 1998-2022

	1998	2002	2007	2011	2015	2019	2020	2021	2022
Number of inhabitants	2937	2837	2636	2523	2506	2429	2427	2396	2378

Source: Authors processing according to received data from Primaria Petrova, <http://statistici.insse.ro>[15,20]

The data used in the analysis of the population evolution includes information starting from 1880, and as shown in figure 4, 5, it can be seen that the number of inhabitants today is similar to that of the population in 1880. The highest growth rate is recorded in the interwar period, the maximum being reached in the 1941 census, with 4734 inhabitants, and the minimum in 1880, with 2311 inhabitants. [20]

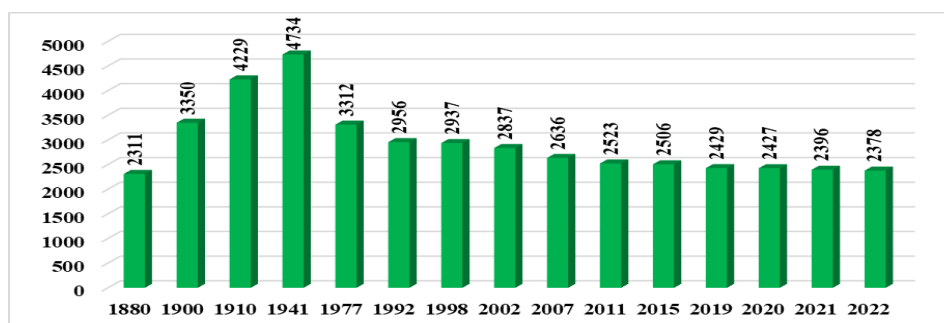


Figure 4. The evolution of the inhabitants in Petrova between 1880 – 2022

Source: Authors processing according to received data from Primaria Petrova, <http://statistici.insse.ro>[15,20]

Gender ratios are within normal limits and do not present imbalances that could generate major demographic problems. Next, we presented the gender evolution of the population in the analyzed commune. The evolution is presented both tabularly and graphically. (Table 3, Figure 5.)

Table 3

Evolution by gender of the inhabitants of Petrova

	1992	1998	2001	2011	2015	2019	2020	2021	2022
Male	1552	1462	1425	1256	1236	1200	1197	1185	1171
Female	1588	1475	1428	1267	1270	1229	1230	1211	1207
TOTAL	3140	2937	2853	2523	2506	2429	2427	2396	2378

Source: Authors processing according to received data from Primaria Petrova, <http://statistici.insse.ro>[15,20]

From the data presented, it can be observed that the number of female persons, in each analyzed year, is higher than the number of male persons.

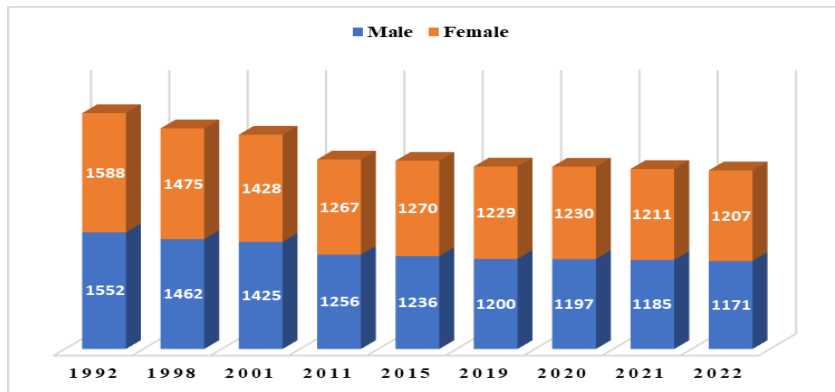


Figure 5. Evolution by gender 1992-2022

Source: Authors processing according to received data from Primaria Petrova, <http://statistici.insse.ro> [15,20]

Regarding the population pyramid, at a first analysis we can identify certain structural dysfunctions, which should draw attention to certain aspects related to the way in which the population of Petrova commune will be structured for the coming years.[6]

The detailed analysis of the evolution of the population, taking into account the age and gender of the inhabitants, is presented in Figure 6, in the form of a graphic pyramid (2022). Numerically, a lower value is observed for the age groups 0-4 years and 5-9 years, which may generate decreases in the working population in the future. Regarding the adult population, it can be observed that the groups 60-64 years and 55-59 years represent two significant groups, a fact that can be a negative one, because these people will pass, in the near future, into the assistance group, that is, they will no longer be able for work. The groups between 40-44 years are also significant, which can mean stability, even in the medium and short term in Petrova commune. [20]

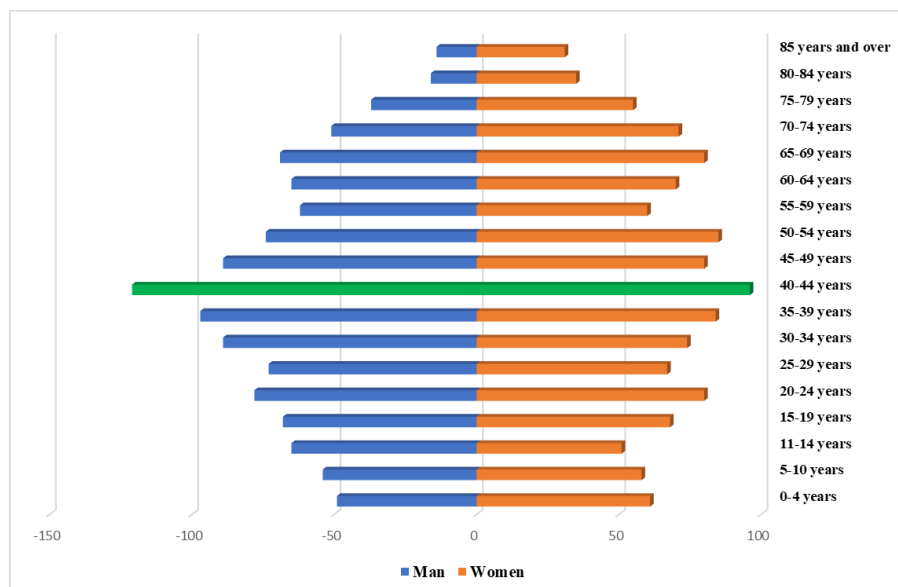


Figure 6. Population pyramid by age groups and gender (2022)

Source: Authors processing according to received data from Primaria Petrova, <http://statistici.insse.ro> [15,20]

A detailed situation of the evolution of the population by main age groups in 1992, 2011, 2020 and 2022 is presented in the following figure.

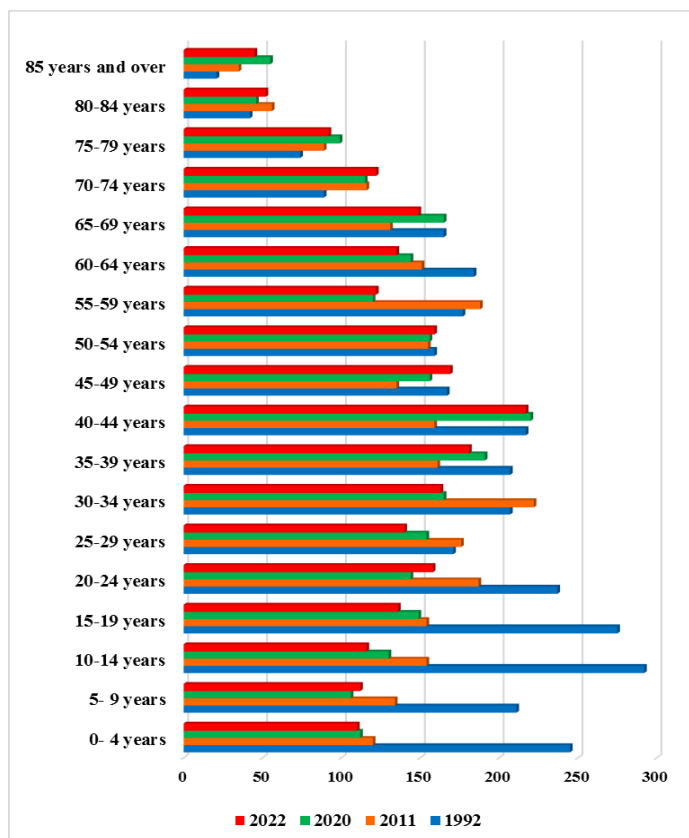


Figure 7. Evolution by age groups of the inhabitants

Source: Authors processing according to received data from Primaria Petrova, <http://statistici.insse.ro> [15,20]

Another important indicator in the development of the commune refers to the natural increase. In order to be able to calculate the natural increase, we must centralize the situation of live births and deceased persons. After identifying these aspects, we must calculate the birth rate and the mortality rate in the studied commune. Finally, after these calculations, we can determine the natural increase. [3]

In Figure 8 we present the situation of live births and deceased persons.

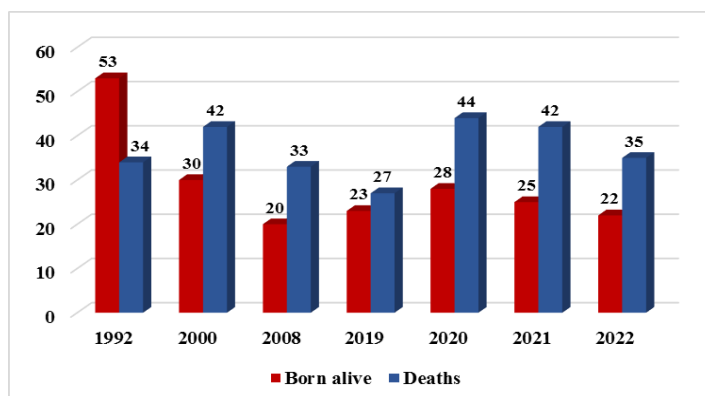


Figure 8. Situation of live births and deaths in Petrova

Source: Authors processing according to received data from Primaria Petrova, <http://statistici.insse.ro> [15,20]

Next, we present a very important indicator for the development of the commune, namely the birth rate, the mortality rate and the natural increase. (Table 4, Figure 9)

Table 4.

Birth rate, death rate and natural increase							
Specification	1992	2000	2008	2019	2020	2021	2022
Birth rate (births/1000 people)	16.87	10.37	7.65	9.46	11.53	10.43	9.25
Mortality rate (deceased/1,000 people)	10.82	14.52	12.63	11.11	18.12	17.52	14.71
The natural increase	6.05	-4.15	-4.98	-1.65	-6.59	-7.09	-5.46

Source: The authors' calculations after <http://statistici.insse.ro> [20]

Following the data presented, it can be seen that starting from the year 2000, the mortality rate was much higher than the birth rate. Apart from the year 1992, where the natural increase was positive, in the following analyzed years this indicator had only negative values.

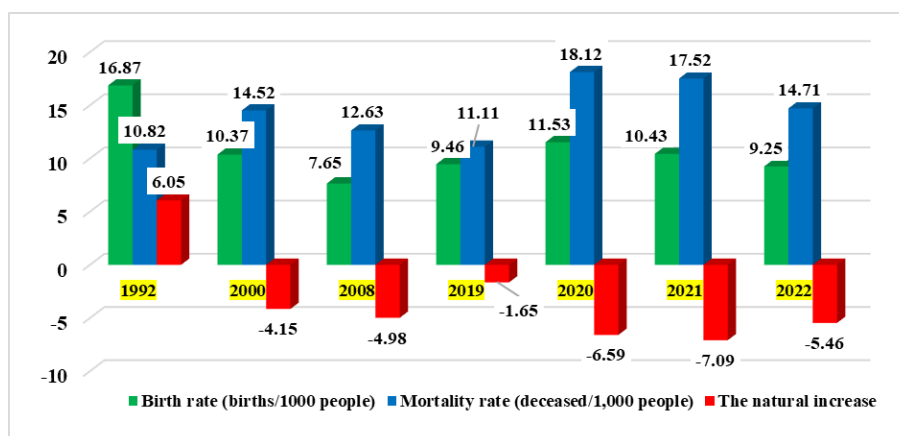


Figure 9. Birth rate, death rate and natural increase

Source: Authors processing according to received data from Primaria Petrova, <http://statistici.insse.ro> [15,20]

Another important aspect refers to the residential establishments of the inhabitants. It is about the people who arrived in a different locality than their domicile, who on January 1st or July 1st had the mention of establishing residence in the identity document and in the population records (Table 5).[4, 15]

Table 5.

Residential establishments in the commune							
Specification	1992	2000	2008	2019	2020	2021	2022
Residential establishments	7	5	6	23	29	21	18

Source: Authors processing according to received data from Primaria Petrova, <http://statistici.insse.ro> [15,20]

Departures with residence from the commune and departures with domicile (including international migration) are important indicators in the development of a community. Departures with residence from the commune refer to people who left with residence in a different locality than their domicile. [5]

Departures with domicile (including international migration) refers to the total number of departures with domicile refers to people who leave the commune and prove that they have secured housing in another locality. These data include international migration (Table 6). [4, 7]

Table 6.**Departures from the commune**

Specification	1992	2000	2008	2019	2020	2021	2022
Departures with residence in the commune	156	61	40	26	35	32	23
Departures with residence (including international migration)	82	33	51	46	37	31	33

Source: Authors processing according to received data from Primaria Petrova, <http://statistici.insse.ro> [15,20]

Other important indicators refer to ethnicity and religious affiliation. The evolution of the population related to the ethnic identity and the membership of a religious confession does not show significant changes over time.[16, 17]

Most of the inhabitants of the commune are Romanian (95.6%). For 2.97% of the population, the ethnicity is unknown and 1.42% are people of other nationalities (2011). In 2014, the majority percentage is much higher, the number of Romanians being 98.57%, and the rest of the inhabitants are of Roma ethnicity 0.61% and Ukrainian 0.82% (2014). [16]

From a religious point of view, the majority of the inhabitants are Orthodox (93.98%), 2.93% of the population are Catholic and 3.08% have other religious affiliations. (2011)

In 2014, we find the same percentage of 93.98% among Orthodox, 0.48% are Catholic and the remaining 5.54% have other religious affiliations. [17]

At the level of the commune of Petrova there is only one educational unit with legal personality, it owns structures on the territory of the commune in 4 points: 1 for preschool education, 1 for primary education, 1 for secondary education and 1 for high school education (Tabel 7). [20]

Table 7.**Educational units in Petrova**

Specification	1992	2000	2008	2019	2020	2021	2022
Pre-school	1	0	0	0	0	0	0
Primary and secondary school (including special education)	1	1	0	0	0	0	0
High school	0	0	1	1	1	1	1
Total	2	1	1	1	1	1	1

Source: Authors processing according to received data from Primaria Petrova, <http://statistici.insse.ro> [15,20]

Regarding the structure of the school population by education cycle, we can identify a major regression in terms of the number of children and students who attend the educational units. (Tabel 8, Figure 9).

Table 8.**The school population in Petrova commune**

Specification	1992	2000	2008	2019	2020	2021	2022
Children registered in kindergarten	148	100	89	75	75	75	69
Pupils registered in primary and secondary school (including special education)	356	316	266	192	192	184	176
Pupils registered in high school education	0	0	93	50	61	55	47
Pupils enrolled in vocational education	0	0	64	49	42	27	27
Total	504	416	512	366	370	341	319

Source: Authors processing according to received data from Primaria Petrova, <http://statistici.insse.ro> [15,20]

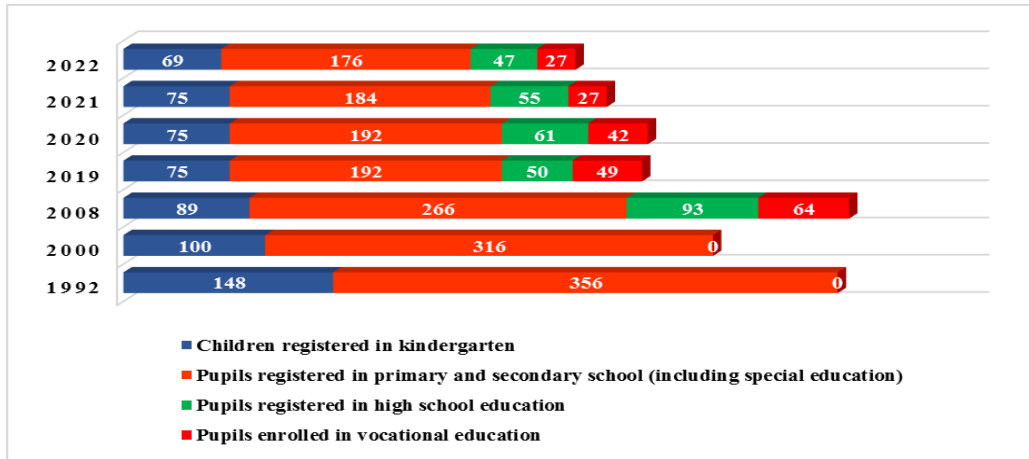


Figure 9. The school population in Petrova

Source: Authors processing according to received data from Primaria Petrova, <http://statistici.insse.ro> [15,20]

From the point of view of the medical infrastructure, in Petrova commune in 2021 there is 1 family medical office, 1 dental office, 2 pharmacy-type sanitary units. [15]

Table 9.

Categories of health facilities

Specification	1995	2000	2008	2019	2020	2021
Medical dispensary	1	0	0	0	0	0
Family medical offices	0	0	1	1	1	1
Dental offices	0	0	1	1	1	1
Pharmacies	0	0	0	2	2	2
Pharmaceutical points	1	1	0	0	0	0

Source: Authors processing according to received data from Primaria Petrova, <http://statistici.insse.ro> [15,20]

Related to the human resource, within the commune there are 2 doctors registered in the category of medical-sanitary personnel, 1 dentist and 3 pharmacists, but besides these, there are also 6 people in the category of average health personnel. (Figure 10.). [13]

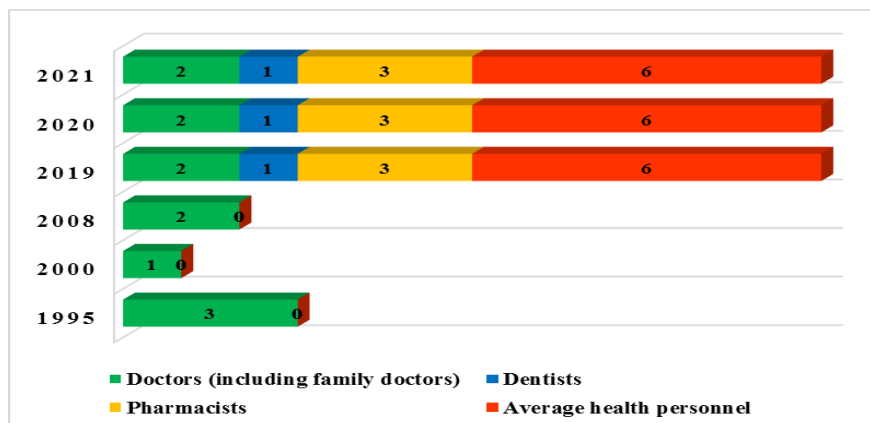


Figure 10. Categories of medico-sanitary personnel

Source: Authors processing according to received data from Primaria Petrova, <http://statistici.insse.ro> [15,20]

CONCLUSIONS

The study carried out about Petrova manages to highlight several aspects. Regarding the evolution of the inhabitants in the commune, a continuous decrease in the number of inhabitants can be observed starting with the year 1992 until the present.

The most numerous age group in the commune in the year 2021 is represented by the inhabitants aged between 40-44 years. Along with the decrease in the number of inhabitants, the number of inhabitants by age group in the commune also decreased.

Due to the large number of registered deaths and the very small number of births, the natural increase of the commune has a strongly negative tendency.

As a conclusion regarding the demographic evolution and the way of structuring the population by age groups, the statistical analysis highlights a negative trend, both in terms of the demographic evolution and also in the settlement of the commune's population by age groups. According to the evolution of the last 10 years, we can draw the conclusion of a population decrease.

Regarding the number of people who settled in the analyzed commune, there was an increase in the years 2019 and 2020, after these years the number of people who settled began to decrease.

The situation regarding educational institutions is not very good. For this reason, many families choose to leave the commune so that their children can benefit from quality education. Following the analyzed data, it was observed that starting with the year 2008, the number of the school population in the commune was considerably reduced. In terms of health, there are few health facilities in the commune, and the number of medical personnel is also low. For the development of the commune, the improvement of the quality of life in the area must be taken into account, through the diversification of the economy.

The primary, secondary education and high school at the level of Petrova community is another vulnerable aspect which needs special attention.

We need to identify, a very important aspect, namely the need to establish a practice structure for high school students in the commune.

Among the threats that affect the commune, we mention the following: the decrease in the population due to negative natural growth, the decrease in the active, working-age population and the migration of the qualified population and local values.

Among the strengths of the commune that would lead to development and progress, we mention: the existence of diversified agricultural crops, agro-tourism potential, the existence of traditions, customs and folk customs, the existence of local resources in terms of agricultural areas, the possibility of accessing government programs, the entry into the tourist circuit of Maramureș county and others.

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