POPULATION AGEING IN CROATIA: REGIONAL DIFFERENCES AND CHALLENGES

UDC: 314.117-053(497.5)"2021"
DOI: https://doi.org/10.37658/MGD24175b

Sanja K. BOGADI[1], Dubravka SPEVEC[2], Sonja PODGORELEC[1]
[1]Institute for Migration and Ethnic Studies, Department for Migration and Demographic Research, Zagreb, Croatia
[2]Faculty of Science, Department of Geography, University of Zagreb, Zagreb, Croatia
e-mail: sanja.klempic@imin.hr

ABSTRACT

The contemporary demographic picture of Croatia is characterized by depopulation and population ageing. According to the results of the latest population census in 2021, Croatia, with a share of the population aged 65 and over at 22.5% and a median age of 45.4, ranks among the world's oldest countries. This paper examines regional differences in population ageing within Croatia and the availability of formal care, i.e., elderly care homes. The analysis data shows that differences in the possibilities of institutional care provision are continuously increasing in the organization of formal care forms, mainly in terms of the level of economic development. Counties more exposed to strong emigration, sparsely populated, with a higher proportion of population primarily engaged in agriculture, are the counties with a higher number of older people, higher proportion of single-person households, lower GDP, higher poverty risk rate, and less organized forms of institutional accommodation.

Keywords: population ageing, formal care, elderly care homes, counties, Croatia

INTRODUCION

In European Union countries, care policies are increasingly oriented towards facilitating the ability of older persons to age in place, emphasizing the importance of enabling them to stay in their own homes for as long as possible. This approach is complemented by the establishment of diverse non-institutional forms of assistance and home care services. Concurrently, care policies for the elderly in Croatia only partially align with European trends. This discrepancy arises from several factors, including underdeveloped local governance structures for care systems, inadequate networks of institutional care facilities, and ambiguous financing systems (Žganec et al., 2007), compounded by significant economic disparities.

Croatia, with a demographic landscape characterized by decades-long depopulation accompanied by rapid ageing, presents a challenge for planning formal care for the elderly and devising sustainable public policies. This challenge is particularly significant due to the rising number of individuals aged 80 and above. Within this demographic, there is an increasing proportion of people experiencing compromised physical and/or mental health, which impedes independent living for many. This growing segment of the population requires various forms

of long-term care (LTC), which can only be provided by well-organized institutional care facilities.

Care for the elderly in Croatia, like in most European countries, relies on informal caregivers (Klempić Bogadi and Podgorelec, 2024). The socio-cultural and economic conditions of elderly Croatian citizens vary depending on their geographical location – whether they live in urban or rural environments, large or small cities, economically developed or less developed areas, regions experiencing migration influxes or declines, or depopulating regions. What is common across all areas, regardless of their level of development, is mutual assistance and caregiving primarily within the family or household. Whether it involves material (not just financial), emotional, and/or instrumental assistance, help or care is most often provided by spouses, children (more often daughters) (Štambuk et al., 2019), and other family members, friends, and neighbours (Podgorelec, 2008; Podgorelec and Klempić Bogadi, 2013). However, changes that Croatian society has undergone in recent decades, particularly in terms of reducing household sizes and family structures, gender equality in employment, and significant migration of younger populations (from rural to urban areas, but increasingly abroad in the past decade), necessitate well-organized formal care for the elderly (Klempić Bogadi and Podgorelec, 2024). For example, the inability to receive support and/or care from children was highlighted by nearly one-fourth of respondents (24.5%) in a study conducted on a large, albeit self-selected, sample of 3001 users of social care centres across all Croatian counties (Penava Šimac et al., 2022). In this paper, we will use standard ageing indicators to demonstrate the spatial aspect of population ageing in Croatia, as well as the availability of formal care, i.e., elderly care homes. We analyse data from population censuses 2001, 2011, and 2021, as well as data from the Ministry of Labor, Pension System, Family, and Social Policy on elderly care homes. In this way, we aim to provide a spatial demographic sketch of the level of population ageing and unequal availability of institutional care forms across various parts of Croatia.

Regional Differences in Population Ageing in Croatia

Demographic ageing has emerged because of declining fertility rates and extended life expectancy. In Croatia, this process has been further accelerated due to several decades of emigration. Emigration to European countries began as early as the 1960s and has continued to the present day, varying only in intensity over the decades. The Homeland War in the 1990s, along with other unfavourable demographic effects, hastened the ageing process (Nejašmić and Toskić, 2013). Croatia's accession to the EU in 2013 intensified emigration, resulting in an acceleration of depopulation and ageing. In the intercensal period from 2011 to 2021, Croatia experienced a decrease of 413,056 inhabitants, representing a decline of 9.6%. During the same period, the number of elderly residents increased by 110,606, or 14.6%. According to the results of the latest population census in 2021, Croatia, with a share of the population aged 65 and over at 22.5% and a median age of 45.4, ranks among the world's oldest countries.

Although demographic ageing is a characteristic of the entire Croatia, its intensity varies among different regions. The counties with the most unfavourable values of ageing indicators are as follows: Šibenik-Knin (share of the elderly in the total population 27.4; ageing index 215.0;

average age 47.0; old-age dependency ratio 45.8), Lika-Senj (share of the elderly in the total population 26.3; ageing index 209.6; average age 46.8; old-age dependency ratio 42.9), and Primorje-Gorski kotar (share of the elderly in the total population 25.8; ageing index 207.3; average age 46.7; old-age dependency ratio 41.8) (Table 1).

Table 1. Indicators of population ageing by counties in Croatia in 2021

County	Population	People aged						Ageing index	Old-age dependency ratio	Average age
		0-14 years		15-64 years		65 and over years				
		no.	%	no.	%	no.	%			
Croatia	**3,871,833**	**552,416**	**14.3**	**2.450.178**	**63.3**	**869,239**	**22.5**	**157.4**	**35.5**	**44.3**
Zagreb	299,985	44,605	14.9	191.459	63.8	63,921	21.3	143.3	33.4	43.5
Krapina-Zagorje	120,702	16,595	13.7	79.031	65.5	25,076	20.8	151.1	31.7	44.0
Sisak-Moslavina	139,603	18,238	13.1	86.864	62.2	34,501	24.7	189.2	39.7	45.9
Karlovac	112,195	14,452	12.9	70.276	62.6	27,467	24.5	190.1	39.1	46.2
Varaždin	159,487	22,153	13.9	104.183	65.3	33,151	20.8	149.6	31.8	43.9
Koprivnica-Križevci	101,221	14,618	14.4	64.326	63.6	22,277	22.0	152.4	34.6	44.2
Bjelovar-Bilogora	101,879	14,653	14.4	63.552	62.4	23,674	23.2	161.6	37.3	44.7
Primorje-Gorski kotar	265,419	33,058	12.5	163.822	61.7	68,539	25.8	207.3	41.8	46.7
Lika-Senj	42,748	5,356	12.5	26.168	61.2	11,224	26.3	209.6	42.9	46.8
Virovitica-Podravina	70,368	9,925	14.1	44.977	63.9	15,466	22.0	155.8	34.4	44.5
Požega-Slavonia	64,084	9,152	14.3	40.288	62.9	14,644	22.9	160.0	36.3	44.5
Slavonski Brod-Posavina	130,267	18,574	14.3	82.233	63.1	29,460	22.6	158.6	35.8	44.4
Zadar	159,766	23,264	14.6	98.211	61.5	38,291	24.0	164.6	39.0	44.6
Osijek-Baranja	258,026	35,416	13.7	165.876	64.3	56,734	22.0	160.2	34.2	44.5
Šibenik-Knin	96,381	12,279	12.7	57.702	59.9	26,400	27.4	215.0	45.8	47.0
Vukovar-Sirmium	143,113	20,166	14.1	90.255	63.1	32,692	22.8	162.1	36.2	44.6
Split-Dalmatia	423,407	62,619	14.8	268.678	63.5	92,110	21.8	147.1	34.3	43.6
Istria	195,237	26,035	13.3	122.043	62.5	47,159	24.2	181.1	38.6	45.8
Dubrovnik-Neretva	115,564	17,728	15.3	71.813	62.1	26,023	22.5	146.8	36.2	43.8
Međimurje	105,250	16,886	16.0	66.707	63.4	21,657	20.6	128.3	32.5	42.9
City of Zagreb	767,131	116,644	15.2	491.714	64.1	158,773	20.7	136.1	32.3	43.0

Source: author's calculation based on the data from the Census 2021

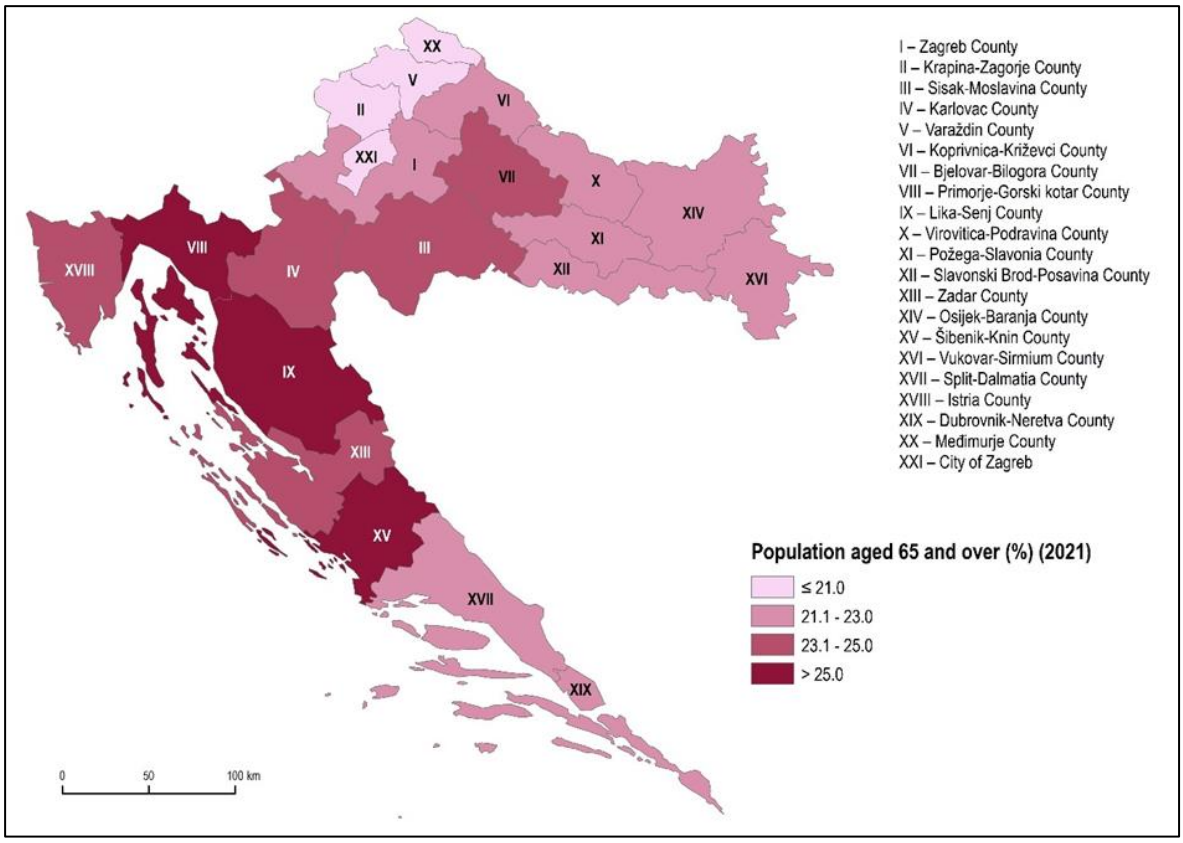

Figure 1. The share of the population aged 65 or older in the total population by counties in Croatia in 2021

On the other hand, the smallest share of the elderly, the most favourable ageing index, and the lowest average age are found in Međimurje County and the City of Zagreb (Figure 1).

In comparison to the growth of the population aged 65 or over, the increase of the population aged 80 and above is even faster. In 2021, Croatia was home to 214,666 persons aged 80 or older, accounting for 5.5% of the total population. Twenty years earlier, their number was half as much (99,507), constituting only 2.2% of the population (CBS, 2002). The proportion of people aged 80 years or older varies across regions. The lowest percentages are found in Zagreb County and Međimurje County at 4.7%, and Varaždin County at 4.9% (CBS, 2022a). Additionally, six counties have proportions below the national average, while two match the Croatian average. Conversely, ten counties exceed the national average. Particularly notable are Lika-Senj County at 8% and Šibenik-Knin County at 7.8%, highlighting an exceptionally unfavourable age structure in these areas (Figure 2). The increase in the number of individuals aged 80 and over indicates a rising need for formal care, long-term care, and placement in elderly care homes. In Croatia, significant regional disparities are evident in the development and quality of healthcare networks and social services (Klempić Bogadi and Podgorelec, 2024).

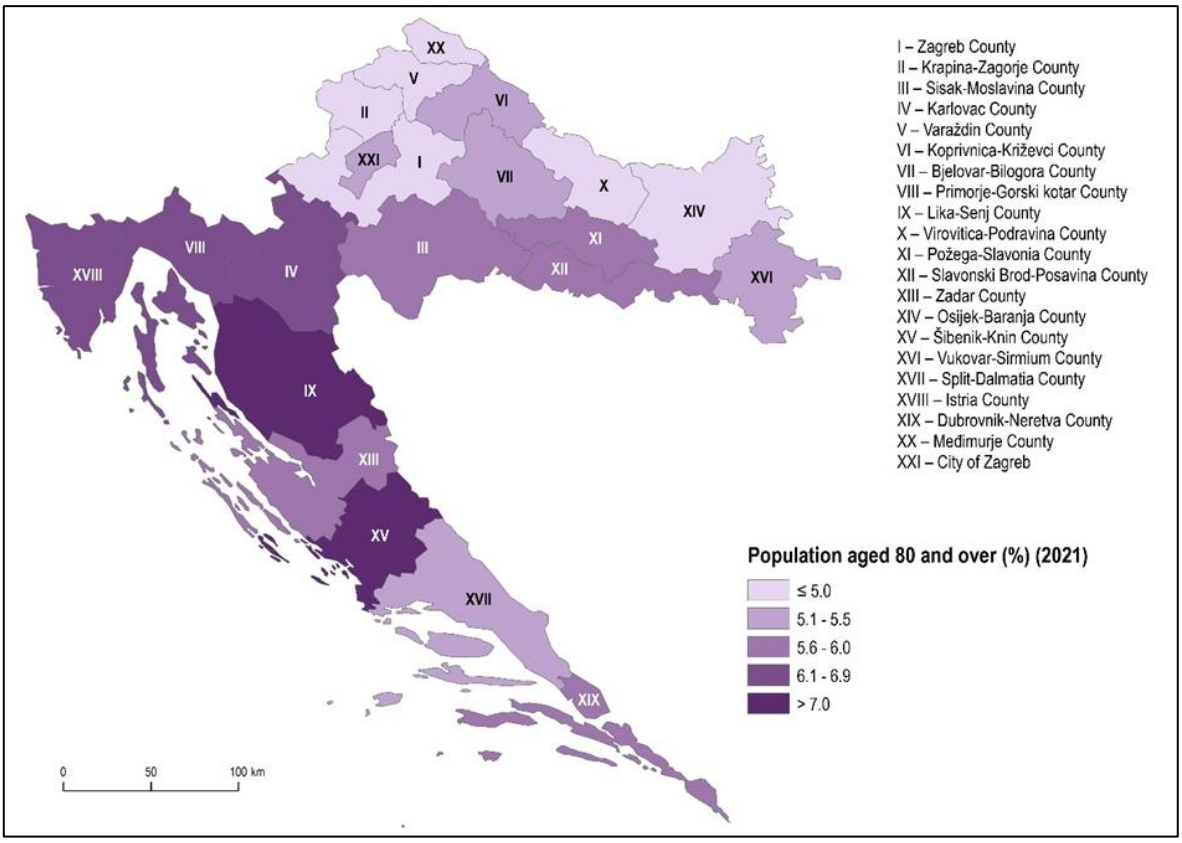

Figure 2. The share of the population aged 80 or older in the total population by counties in Croatia in 2021

Households of Older Persons Living Alone

Another demographic trend characterizing European countries is the continuous increase in single-person households. In 2021, older people lived in 50.5% of these households in Croatia (CBS, 2023). This is very important not only in demographic terms but also for various public systems, primarily healthcare and social care. The living arrangements of older people play a crucial role in shaping "their economic well-being, as well as their physical, psychosocial health, and overall life satisfaction" (UN, 2020, p.1). Living in a single-person household is often results in an increase in feelings of loneliness and actual social isolation. Additionally, it increases the need for services to enable older individuals to continue living in their own homes (Klempić Bogadi and Podgorelec, 2024). In 2021, the elderly lived in 201,673 single-person households, of which 144,369 were female single-person households, and 57,304 were male (CBS, 2023). Women tend to live longer than men, and this is reflected in the gender gap at older ages. In 2021, among individuals aged 65 and over, 58.4% were women. With advanced age, their proportion increases, so in the age group of 80 and over, they make up 66.4% of the population (CBS, 2022a).

In Croatia, older women were nearly twice as likely as their male counterparts to live alone, with share of 28.4% for women and 15.9% for men. The largest gender differences are observed in four Slavonian counties: Virovitica-Podravina (16.9 percentage points), Vukovar-Sirnium (16.6), Osijek-Baranja (16.4), and Požega-Slavonia (16.2) (Figure 3). Conversely, the smallest gender gap was observed in Krapina-Zagorje (6 percentage points), Varaždin (8.5) and Zagreb (8.7).

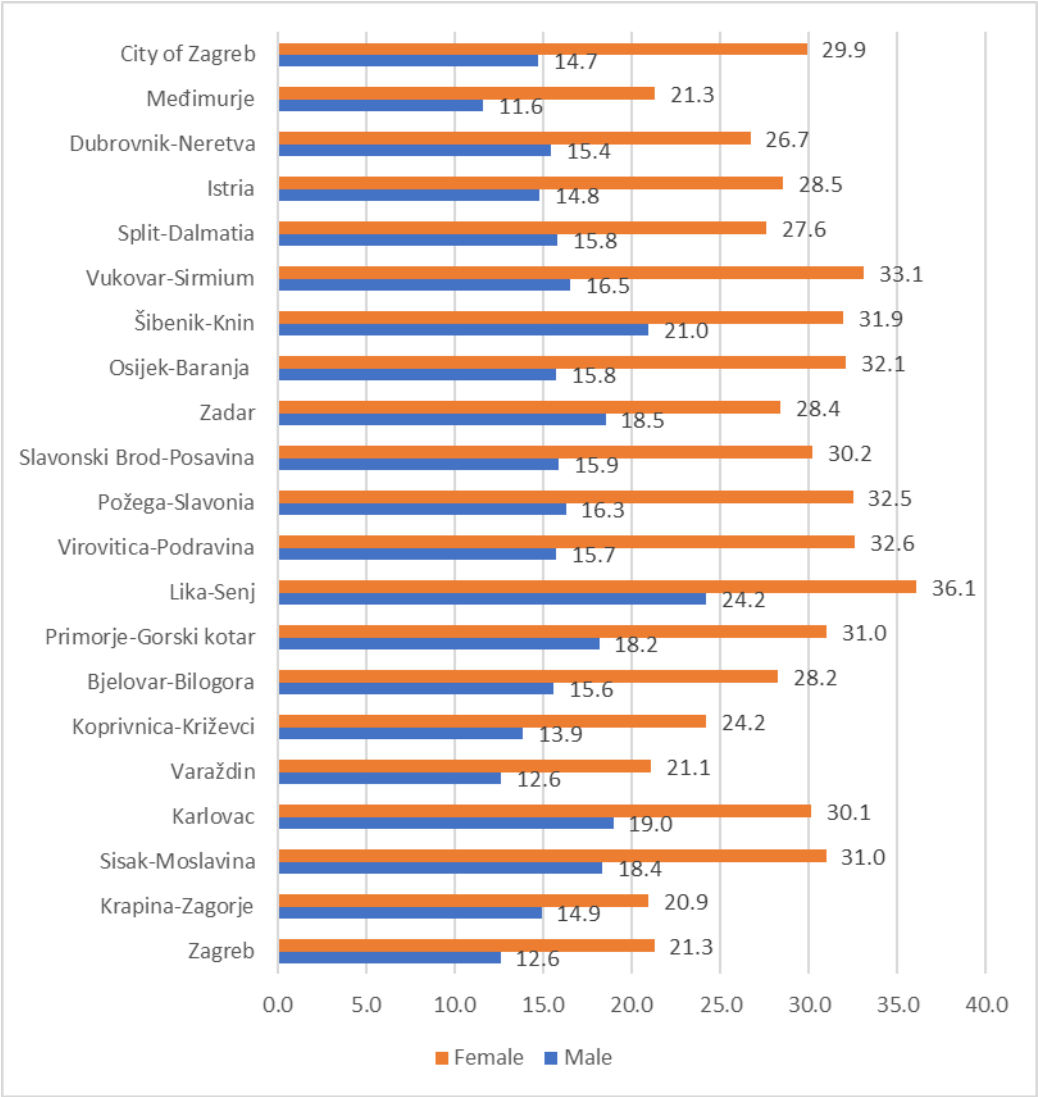

Figure 3. Percentages of men and women aged 65 years or over who live alone by counties in Croatia in 2021

Living alone for older persons is more acceptable and less stressful if it's their own choice and if, besides family, they have more or less regular contact with friends and/or neighbours.

In Croatia, single-person households of individuals aged 65 and older are at an extremely high risk of poverty. In 2023, at-risk-of-poverty rate of these households was 59.9% (CBS, 2024). At the same time, at-risk-of-poverty rate is 19.3%, but in the age group of 65 or older, it is almost double and amounts to 34.8%, which reflects the very unfavourable financial circumstances of a large number of older people (CBS, 2024). Tracking this indicator for the age group 65+ since 2018, when it was at 28.1%, reveals a consistent upward trend. During the same period, there was also a significant increase at-risk-of-poverty rate for single-person households aged 65+. It was 48.1% in 2018 (CBS, 2022b). In Croatia, there is a significantly larger number of women aged 65 and over who live alone, and women in general are at a higher risk of poverty compared to men.

The research on the geographical distribution of poverty in Croatia conducted by the CBS and the World Bank showed significant regional disparities (World Bank, 2016). The lowest estimates of the poverty risk rate were in the City of Zagreb (8.9%), Primorje-Gorski Kotar County (11.9%), and Istria County (11.9%). These are also the counties with the highest GDP per capita levels in Croatia. Counties with the highest risk of poverty were Brod-Posavina (35.9%) and Virovitica-Podravina (33.4%), which are also at the bottom of the GDP per capita ranking. The unfavourable economic position of certain counties is reflected in the organization of various public systems, including the one for formal care of the elderly. What makes the situation even more unfavourable is that economically weaker counties are areas of greater emigration, which also results in a reduction of potential informal caregiver. Growing regional economic inequalities and the existing partially decentralized organization of the social care system for the elderly lead to an increase in social inequalities among older population (Babić, 2017, p.25).

Elderly care homes

Older Croatian citizens are provided with formal institutional care by 3 state-owned homes, 45 county-owned homes, and 119 non-state or private homes (MROSP, 2023). The average proportion of older adults residing in elderly care homes in OECD countries is 4% (OECD 2021). According to the latest population census in Croatia (2021), 24,488 individuals aged 65 and above were living in institutional care, accounting for 2.8%. Data as of December 31, 2022 (MRSOP, 2023) shows that there were 18,936 residents in the three types of elderly care homes. Additionally, around 3% of older Croatian citizens are in institutional care, including those residing in smaller facilities such as family homes and through foster care arrangements.

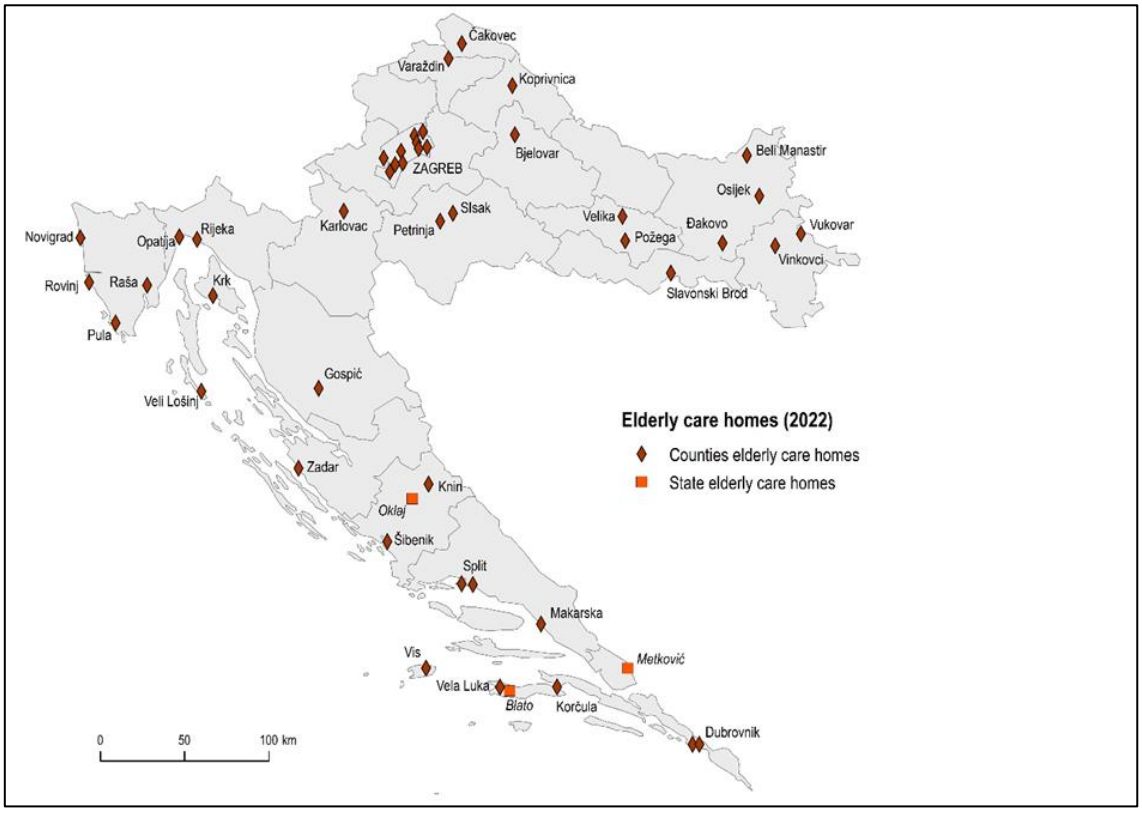

Figure 4. The spatial distribution of state and counties elderly care homes in Croatia in 2023

Only 169 elderly residents live in the three state-owned homes (MROSP, 2023). One is in Šibenik-Knin County, and two are in Dubrovnik-Neretva County. The largest number of older people, 10,525 of them, live in 45 non-state decentralized homes whose founder is a unit of regional self-government, i.e., counties (county care homes) – totalling 56% (MROSP, 2023). These homes are co-financed by the counties, making the accommodation prices considerably more affordable compared to private homes, and their capacities are consistently filled. Institutional care for the elderly was decentralized to regional self-government units (counties) in 2001, and since then, there have been no new public elderly care homes opened in county ownership (Babić, 2017). Since then, the number of older people has significantly increased, as well as the demand for institutional accommodation. Due to long waiting lists in county-owned homes, many of them are forced to go to private facilities, which are considerably more expensive. Furthermore, if a person wants to move to a elderly care home and continue living as close as possible to their home, often the only option is to go to a private facility.

In private homes with a capacity for 7,858 individuals, there were 7,213 residents by the end of 2022 (MROSP, 2023). Given that all private homes were established, and most were built in the 2000s, there is a significant difference in the quality and equipment of residential spaces compared to county care homes. Unlike them, county care homes were mostly built during socialism and require significant renovation. The advantage of county care homes over most private ones is that private facilities often cut costs on staffing (nurses and caregivers), resulting in inadequate levels of care despite higher accommodation prices (Klempić Bogadi and Podgorelec, 2024).

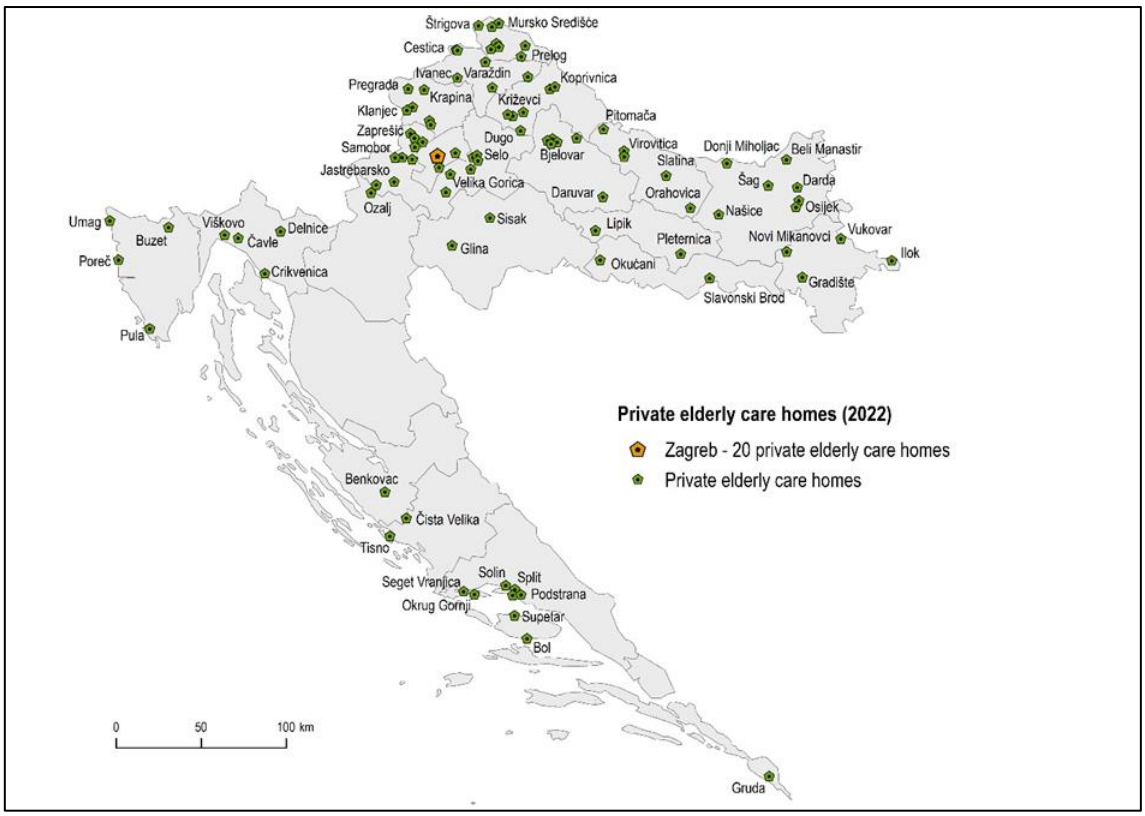

Figure 5. The spatial distribution of private elderly care homes in Croatia in 2023

The spatial distribution of elderly care homes indicates a significant concentration in the City of Zagreb – 10 out of a total of 45 county care homes and 24 private homes. However, the City of Zagreb is also home to the largest number of inhabitants aged 65 and above (158,773 or 18.2%) (CBS, 2022a). The proportion of older adults residing in elderly care homes in the City of Zagreb is slightly above the Croatian average, standing at 3.3% (CBS, 2023).

Three counties have a proportion of people aged 65+ residing in institutions above the European average. These are Međimurje County with 4.8% residing in one county care home and 10 private homes, Bjelovar-Bilogora County with 4.7% residing in 1 county care home and 6 private homes, and Koprivnica-Križevci County with 4.4% residing in 1 county care home and 6 private homes. In these counties, formal care accommodation in elderly care homes for older adults relies almost entirely on private capacities.

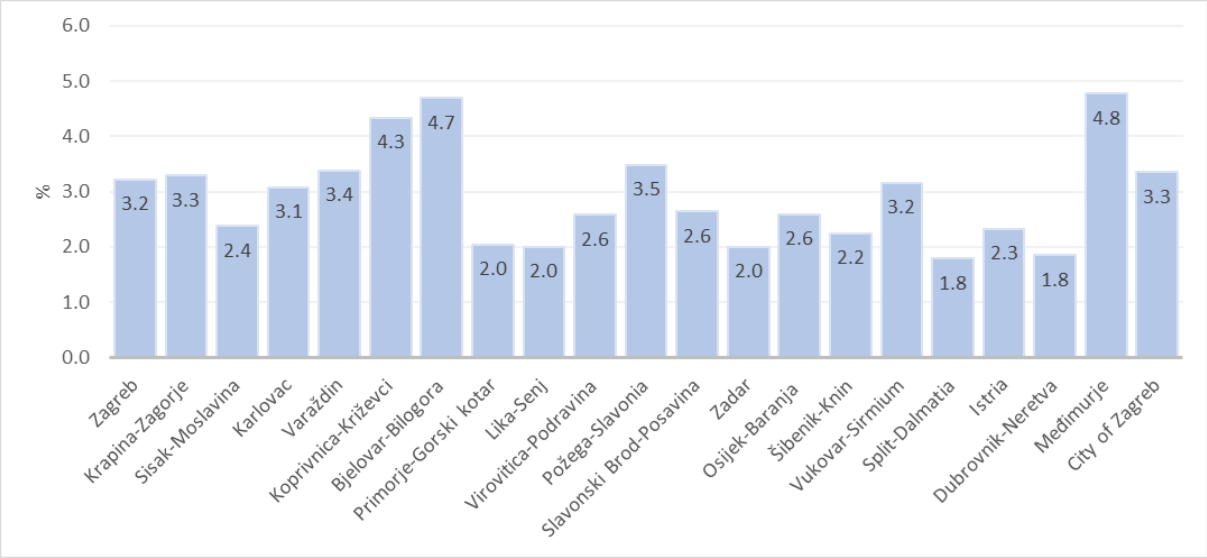

Figure 6. The share of persons aged 65 or older in the total population aged 65 or older who live in elderly care homes by counties in Croatia in 2023

After the City of Zagreb, the highest number of county care homes, with 4 each, are found in Primorje-Gorski Kotar, Split-Dalmatia, Istria, and Dubrovnik-Neretva County. Although these are economically developed counties, the number of people aged 65+ institutionally cared for is below the Croatian average. Alongside the 5 private homes in Primorje-Gorski Kotar County, only 2.0% of the total number of people aged 65+ are accommodated. The percentage of people aged 65+ in institutional care is even lower at 1.8% in Split-Dalmatia County, with 8 private homes, and 1 private and 2 state-owned homes in Dubrovnik-Neretva County. In Istria County, 2.3% of the population aged 65+ reside in 4 private and 4 county care homes. Following them is Osijek-Baranja County with three county care homes and 7 private homes accommodating 2.6% of the population. Two county care homes are present in Šibenik-Knin, Sisak-Moslavina, Požega-Slavonia, and Vukovar-Srijem County. One each in Karlovac, Varaždin, Koprivnica-Križevci, Lika-Senj, Brod-Posavina, and Zadar County. Zagreb, Krapina-Zagorje, and Virovitica-Podravina County have no county care homes. Therefore, Zagreb County has 16 private homes where 3.2% of the population aged 65+ reside. In 6 private homes in Krapina-Zagorje

County, 3.3% of the elderly reside, and in 5 private homes in Virovitica-Podravina County, 2.6% reside.

A study on the availability of institutional care for the elderly across counties and social programs for the elderly in four local government units confirmed that the level of realization of social rights depends on two parameters - place of residence (county) and socioeconomic status (Babić, 2017). Research on the needs of older adults for social care services in Croatia confirmed differences in the need for formal care forms based on the size of the place where individuals live (large or small city) (Penava Šimac et al., 2022). The same study showed that in larger cities, more users express a desire for accommodation in elderly care homes, for organized daily activities, and for home care services (Penava Šimac et al., 2022: 201).

In Croatia, almost all state and county-owned homes are located in urban areas. A similar situation exists with private homes as well. Namely, almost all county homes were built during a period when rural areas had already significantly depopulated, so there was no financial interest in building care homes, and often there was also a lack of professional workforce to work in the institution (Podgorelec, 2008). At the same time, care and support for an elderly family member, especially a spouse or parent, were almost unquestionable. Entrusting care to an institution was considered a shame for the family (Babić et al., 2004, Podgorelec, 2008). The traditional reliance on informal caregivers in rural areas persists today, although modern lifestyles impose new values, thus organized formal care is increasingly accepted both by older family members and by the local community (Podgorelec & Klempić Bogadi, 2013).

CONCLUSION

Despite contemporary trends advocating primarily for healthy and active ageing, i.e., the prolonged maintenance of independence for older persons and living in their own homes, Croatia's rapidly ageing population requires good organization and a balanced relationship between formal care institutions and informal caregivers. The intensity of ageing, coupled with an increasing share of the vulnerable elderly group aged 80 and above, who largely require assistance, and whose numbers have doubled in the last twenty years, varies across regions.

From the analysed data, it is noticeable that differences in the possibilities of institutional care provision are continuously increasing in the organization of formal care forms, mainly in terms of the level of economic development. Counties more exposed to strong emigration, sparsely populated, with a higher proportion of population primarily engaged in agriculture, are the counties with a higher number of older people, higher proportion of single-person households, lower GDP, higher poverty risk rate, and less organized forms of institutional accommodation.

Part of the problem is that almost all homes funded by counties and which, due to their cost, can be considered affordable for the majority of Croatian retirees today, were built during the planned economy period, until 1990. With the change in the political system in 1991 and the transition to a market economy, institutional care increasingly shifts to the private sector. Private homes have largely replaced the need for caring for the elderly, reducing long waiting lists. The problem is that accommodation prices and accompanying services are not always adequately aligned. Similar public policies for elderly care in nursing and care institutions have

been observed in various degrees in other European countries, especially former socialist countries, since the mid-2000s.

ACKNOWLEDGMENTS

This paper is the result of the scientific research project How Do People Age in Croatia? (DOBHR), funded by the European Union – NextGenerationEU for the period 2024–2027.

REFERENCES

1. Babić, D., Lajić, I., Podgorelec, S. (2004): Otoci dviju generacija. Zagreb: Institut za migracije i narodnosti.
2. Babić, Z. (2017): Decentralizacija socijalne skrbi i socijalne nejednakosti: slučaj Hrvatske. Revija za socijalnu politiku, 25(1), pp. 25-48.
3. CBS (2002): Population by age and sex, settlements, Census 2001. https://web.dzs.hr/Hrv/censuses/Census2001/Popis/H01_01_01/H01_01_01.html (Accessed: 10.4.2020.)
4. CBS (2022a): Census of population, households and dwellings in 2021, Population by settlements, https://podaci.dzs.hr/media/rqybclnx/popis_2021-stanovnistvo_po_naseljima.xlsx (Accessed: 13.9.2022.)
5. CBS (2022b): Income and Living Conditions Survey Results, 2021, Statistical Reports. https://podaci.dzs.hr/media/ambo1tkl/si-1710-rezultati-ankete-o-dohotku-stanovnistva-u-2021.pdf (Accessed: 13.12.2023.)
6. CBS (2023): Census of population, households and dwellings in 2021, Population by counties, https://podaci.dzs.hr/media/bahkzev0/popis_2021-stanovnistvo_po_zupanijama.xlsx (Accessed: 13.12.2023.)
7. CBS (2024). Indicators of Poverty and Social Exclusion, 2023. https://podaci.dzs.hr/media/vxkmssgw/zudp-2024-1-1-indicators-of-poverty-and-social-exclusion-2023.pdf (Accessed: 28.3.2024.)
8. MROSP (2023): Godišnje statističko izvješće o domovima i korisnicima socijalne skrbi u Republici Hrvatskoj u 2022. godini, Zagreb. https://mrosp.gov.hr/UserDocsImages/dokumenti/Socijalna%20politika/Dokumenti/Statistika/Godi%C5%A1nje%20statisti%C4%8Dko%20izvje%C5%A1%C4%87e%20o%20domovima%20i%20korisnicima%20socijalne%20skrbi%20u%202022.%20godini.pdf (Accessed: 21.11.2023.)
9. Klempić Bogadi, S., Podgorelec, S. (2024): Challenges of Getting Old in Croatia In K. N. Zafeiris, B. Kotzamanis, C. Skiadas (eds.) Population Studies in the Western Balkans. Cham: Springer, pp. 211-230.
10. Nejašmić, I., Toskić, A. (2013): Starenje stanovništva u Hrvatskoj – sadašnje stanje i perspective. Hrvatski geografski glasnik, 75(1), pp. 89-110.
11. OECD (2021): Long-term Care in Croatia: Improving Home Care for the Elderly.
12. Penava Šimac, M., Štambuk, A., Skokandić, L. (2022): Potrebe starijih osoba za uslugama iz sustava socijalne skrbi u Republici Hrvatskoj. Revija za socijalnu politiku, 29(2), pp. 191-212.
13. Podgorelec, S. (2008): Ostarjeti na otoku – kvaliteta života starijega stanovništva hrvatskih otoka. Zagreb: Institut za migracije i narodnosti.
14. Podgorelec, S., Klempić Bogadi, S. (2013): Gradovi potopili škoje – promjene u malim otočnim zajednicama. Zagreb: Institut za migracije i narodnosti.

15. Štambuk, A., Rusac, S., Skokandić, I. (2019): Profil neformalnih njegovatelja starijih osoba u gradu zagrebu. Revija za socijalnu politiku, 26(2), pp. 189-205.
16. UN (2020): World Population Ageing 2020 Highlights. Living arrangements of older persons. New York: United Nations.
17. World Bank (2016): Hrvatska. Ocjena siromaštva za mala područja temeljem potrošnje. https://razvoj.gov.hr/UserDocsImages/Istaknute%20teme/Kartom%20siroma%C5%A1tva/Izvje%C5%A1%C4%87e%20o%20ocjeni%20siroma%C5%A1tva%20za%20mala%20podru%C4%8Dja%20temeljem%20potro%C5%A1nje%20(karte%20siroma%C5%A1tva)%20u%20RH.pdf (Accessed: 12.10.2020.)
18. Žganec, N., Rusac, S., Laklija, M. (2007): Trendovi u skrbi za osobe starije životne dobi u Republici Hrvatskoj i u zemljama Europske unije. Revija za socijalnu politiku, 15(2), pp. 171-188