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INACCESSIBLE HOMES: HOW AGING HOUSING INFRASTRUCTURE AFFECTS OLDER RESIDENTS IN SOUTHWESTERN POLAND

Maria Hełdak[1]✉, Alina Kulczyk-Dynowska[2]✉, Anna Nowel-Śmigaj[3]✉, Katarzyna Przybyła[4]✉

[1] ORCID: 0000-0002-6171-8548
[2] ORCID: 0000-0002-1312-3224
[3] ORCID: 0009-0001-6787-6950
[4] ORCID: 0000-0002-9717-1599
[1,2,3,4] Wroclaw University of Environmental and Life Sciences
Norwida Street, 25, 50-375 Wrocław, **Poland**

ABSTRACT

Motives: The progressive aging of society poses growing challenges for urban housing policy, particularly in post-industrial cities such as Wałbrzych and Jelenia Góra in southwestern Poland. Many older residents live in municipal housing that is technically degraded and poorly adapted to their mobility needs.
Aim: This study aims to evaluate the technical condition and housing standards of municipal residential buildings in central districts of Wałbrzych and Jelenia Góra, with particular attention to the needs of older residents. It also investigates local government initiatives designed to improve mobility and eliminate architectural barriers in public housing.
Results: The findings confirm that municipal housing units are characterized by significant deterioration and a lack of basic adaptations for people with reduced mobility. Public opinion surveys reveal a strong demand for architectural improvements and better access to mobility aids. The study underscores the broader relevance of these challenges in the context of aging societies and the need to modernize public housing infrastructure accordingly.

Keywords: housing standards for the older residents, housing adaptations for the older adults, low quality of life, housing support programs

INTRODUCTION

According to Poland's administrative division and the distribution of competences, municipalities are the smallest units of local government responsible for a substantial portion of public tasks at the local level. Pursuant to the Act of March 8, 1990, on Municipal Government (consolidated text, Journal of Laws of 2024, item 1465), the provision of collective community needs falls within the purview of the municipality's own tasks. These include, among others:

– municipal housing construction;
– family-friendly policies, including providing social, medical, and legal support for pregnant women;
– senior citizen policy.

✉maria.heldak@upwr.edu.pl, ✉alina.kulczyk-dynowska@upwr.edu.pl, ✉anna.nowel-smigaj@upwr.edu.pl, ✉katarzyna.przybyla@upwr.edu.pl

These tasks are further reinforced by the provisions of the Act of June 21, 2001, on the Protection of Tenants' Rights, Municipal Housing Stock, and Amendments to the Civil Code (consolidated text, Journal of Laws of 2023, item 725). Under this Act, municipal housing stock includes premises owned by the municipality or its sole proprietorship companies entrusted with fulfilling the municipality's housing needs, excluding housing cooperatives, as well as properties under the autonomous possession of these entities (Cendrowicz, 2023).

The execution of these public tasks is a complex and challenging issue influenced by various factors such as national housing policy concepts, a housing construction deficit, insufficient rental housing supply, low standards of municipal housing stock, high mortgage rates, rental costs, inflation, and, recently, the energy crisis. These factors pose a real threat of housing exclusion for significant portions of society, potentially leading to homelessness in extreme cases (Andrzejewski, 1987; Cendrowicz, 2023).

In addition to the financial constraints faced by municipalities, which limit the construction of new municipal housing and even hinder the renovation of old inner-city tenement houses, the aging demographic of municipal housing tenants has emerged as a growing issue. Over the last two decades, Poland has witnessed a consistent demographic shift: the proportion of the population in pre-working age has decreased, while the share of the post-working-age population has steadily increased. Polish society is aging, reflecting broader European trends (Hełdak et al., 2024a; Van Hoof & Kazak, 2018; Van Hoof et al., 2018; Van Hoof et al., 2021).

Studies among older adults concerning various barriers in daily life confirm that, in older age groups, the living environment of individuals with disabilities increasingly becomes limited to their home and its surroundings (Gąciarz & Bartkowski, 2014). This is often associated with a general deterioration in health. Limited mobility and reduced social participation are significant issues for older adults, particularly municipal housing tenants, who belong to a socio-economic group with substantially lower incomes and resources and are often at risk of poverty (Gąciarz & Bartkowski, 2014; Hełdak et al., 2018; Piątkowski, 2018; Raszkowski & Bartniczak, 2019). Studies have also shown that older adults prefer to remain in their current place of residence, neighborhood, or town toward the end of their lives. This preference aligns with the "aging in place" theory. Many authors (Van Hoof & Kazak, 2018; Van Hoof et al., 2021; Lawler, 2001; Przybyła et al., 2019; Sixsmith & Sixsmith, 2008; Wiles et al., 2012) have highlighted that remaining in the community with some degree of independence, rather than moving to a social care home, is a more favorable solution for older adults and more cost-effective for the state.

Given the above, the focus should be more on renovating and adapting existing housing for individuals with mobility limitations, including older adults and people with disabilities, rather than offering relocation to new housing. The state and local government policies play a significant role in managing municipal housing stock. The increasing number of post-working-age individuals, the general economic decline among older adults, and the substantial depreciation of municipal housing stock in Poland have motivated further research. This research aims to identify architectural and technical barriers hindering the functioning of older adults and people with disabilities and to propose mitigating and remedial solutions.

The aim of this study is to assess the current technical condition and housing standards for older adults in the inner-city areas of Jelenia Góra and Wałbrzych, located in southwestern Poland. The study addresses the significant technical wear and tear of residential buildings within the municipal housing stock and the associated lack of housing adaptations for individuals with mobility limitations. The research also presents local government initiatives aimed at addressing mobility issues faced by older residents in their homes. The study evaluates the quality of life of individuals living in municipal housing units and examines the availability of facilities designed to facilitate mobility within these homes.

✉maria.heldak@upwr.edu.pl, ✉alina.kulczyk-dynowska@upwr.edu.pl, ✉anna.nowel-smigaj@upwr.edu.pl, ✉katarzyna.przybyla@upwr.edu.pl

MATERIALS AND METHODS

Location and general characteristics of cities

The study focuses on two cities located in the Lower Silesian Voivodeship of Poland: Wałbrzych and Jelenia Góra (Fig. 1).

Wałbrzych is situated approximately 80 km southwest of the regional capital, Wrocław, while Jelenia Góra lies about 110 km to the west of Wrocław. Both cities are urban municipalities with district rights and serve as administrative and service hubs in the region. Wałbrzych, located at an elevation of 450–500 meters above sea level, is nestled in a picturesque valley along the Pełcznica River, surrounded by the forested Wałbrzyskie Mountains.

Jelenia Góra, on the other hand, is situated in the northern part of the Jeleniogórska Valley, encircled by the Izerskie Mountains, Kaczawskie Mountains, Janowickie Ranges, and the Karkonosze Mountains. The cities enjoy favorable transport connections, being relatively close to the borders with the Czech Republic and Germany. Wałbrzych is traversed by National Road 35, which connects Wrocław to the border crossing in Golińsk, while Jelenia Góra is served by National Road 3, linking Świnoujście to Jakuszyce. The two cities are approximately 60 km apart.

Wałbrzych historically functioned as a key center of heavy industry, with its economic base dominated by state-subsidized hard coal mining until the mines were closed in 1998 due to declining profitability (Hutnik & Jastrząb, 2015). In the post-industrial era, the city has developed an industrial-service profile with a dynamically expanding tourism sector, while maintaining its role as the principal urban node within the Wałbrzych Agglomeration (Study of the Conditions and Directions of Spatial Development of the City of Wałbrzych, 2019). Until 1998, both Wałbrzych and Jelenia Góra held the status of provincial capitals; since the 1999 administrative reform, this function has been concentrated exclusively in Wrocław (Kulczyk-Dynowska, 2017). The reform significantly altered employment structures and reduced the central-place functions of these cities (Hełdak et al., 2024a). Empirical analyses confirm a continued decline in their regional significance, reflected in population loss, workforce contraction, and diminishing centrality indices (Przybyła, 2015).

As of mid-2024, Wałbrzych had a population of 99,463, while Jelenia Góra was home to 74,636

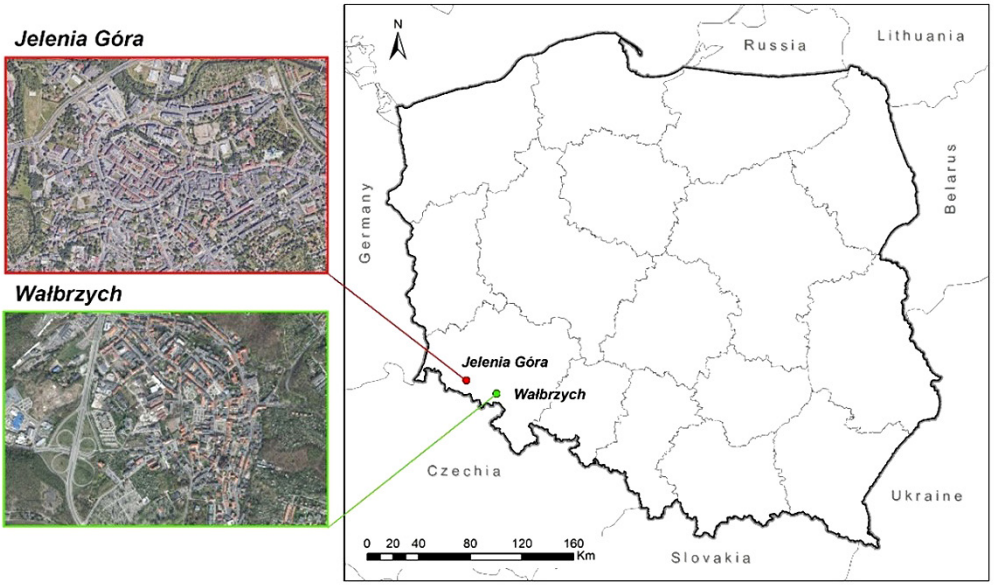

Fig. 1. Location of Wałbrzych and Jelenia Góra at the background of Poland
Source: own elaboration.

✉maria.heldak@upwr.edu.pl, ✉alina.kulczyk-dynowska@upwr.edu.pl, ✉anna.nowel-smigaj@upwr.edu.pl, ✉katarzyna.przybyla@upwr.edu.pl

inhabitants (Statistics Poland, 2024). The age structure in both cities is unfavorable: approximately 30.90% of the population in Jelenia Góra and Wałbrzych are of post-working age. Unfortunately, projections from Statistics Poland suggest that these trends will worsen, with an estimated 12 children under 14 years old and 34 individuals aged 65 and over per 100 residents in Lower Silesia by 2050. Population aging is among the region's most significant demographic challenges (Wojtkowiak-Jagacka & Girul, 2017).

In addition to population aging, the depreciation of residential fabric, particularly in city centers, poses a serious issue. While many historic tenement houses in the urban cores have been renovated, residential buildings outside these areas – often 19th-century rental housing – remain in need of substantial repairs. This problem is especially pronounced in municipal housing stock.

Research methodology

Faced with the deteriorating standard of living, an increasing proportion of post-working-age residents, and the declining technical condition of city-center buildings, the following research questions were formulated:

1. Do the technical standards, equipment, and accessibility features of municipal housing in Jelenia Góra and Wałbrzych adequately meet the essential living needs of the older residents?
2. How significant is the need for housing adaptations among older adults and disabled residents, considering accessibility barriers and the quality of basic facilities?
3. How are the cities attempting to address the limited availability of municipal housing?

The study employed two primary methods of data collection:

1. Analysis of municipal housing stock information, obtained from the Municipal Housing Management Offices in Wałbrzych and Jelenia Góra. These data included the number, structure, technical condition, and equipment standards of municipal dwellings.
2. Structured interviews with tenants of municipal housing units, conducted among individuals aged 60 and older.

The interview results provided detailed information on the living conditions of older residents, including access to utilities (such as hot water, type of heating, and availability of sanitary facilities), as well as the presence of architectural and technical barriers within the dwellings or buildings.

Primary materials were gathered using questionnaires (Kopeć, 1983; Stachak, 1978). After collection, all interview data were transcribed and entered into Microsoft Excel, where they were subject to initial cleaning and verification. Quantitative variables were coded and prepared for statistical processing. Statistical analyses were subsequently conducted using IBM SPSS Statistics version 25. Pearson's chi-square test (χ^2) was applied to examine associations between qualitative variables, with the significance threshold set at $\alpha = 0.05$.

The empirical findings obtained from the interviews were compared with local housing policies and municipal standards regarding housing accessibility and quality. This comparison made it possible to assess the extent to which the activities undertaken by local authorities in both cities address the needs and limitations of older adults living in municipal housing.

To achieve the study's objective, an inventory of the municipal housing stock in Wałbrzych and Jelenia Góra was conducted, complemented by qualitative surveys among individuals aged 60 and older. Surveys were carried out in the first half of 2021 in Wałbrzych and in 2022 in Jelenia Góra. A total of 143 tenants from the municipal housing stock participated in the study: 50 from Wałbrzych and 93 from Jelenia Góra. A purposive-random sampling method was applied, with age and place of residence (Wałbrzych or Jelenia Góra) serving as selection criteria. Considering technological barriers experienced by older adults, such as limited access to computers and the Internet, the survey was conducted via direct interviews.

The study was carried out among tenants of municipal housing units with the support of employees of the Municipal Housing Management Offices in

✉maria.heldak@upwr.edu.pl, ✉alina.kulczyk-dynowska@upwr.edu.pl, ✉anna.nowel-smigaj@upwr.edu.pl, ✉katarzyna.przybyla@upwr.edu.pl

Wałbrzych and Jelenia Góra. These employees assisted in distributing questionnaires among tenants and were frequently present during the interviews, helping to verify the identity and credibility of the interviewers.

In order to determine the maximum number of individuals eligible to participate in the survey, the size of the municipal housing stock was taken into account. In Wałbrzych, the municipal housing stock comprises 4392 dwellings, while in Jelenia Góra it consists of 2514 dwellings. Assuming that one questionnaire could be completed by only one member of each household, the theoretical maximum number of eligible respondents corresponded to the number of occupied dwellings. However, tenants below the age of 60 were excluded from the survey, which reduced the pool of eligible respondents by approximately 50%. Consequently, the number of individuals meeting the study's inclusion criteria was estimated at 2196 in Wałbrzych and 1257 in Jelenia Góra.

Given these figures, the number of completed surveys – 50 in Wałbrzych and 93 in Jelenia Góra – was considered adequate and representative for the group of older municipal housing tenants included in the study.

RESULTS

Characteristics of the Municipal Housing Stock

The municipal housing stock of Wałbrzych and Jelenia Góra consists of units owned by the municipalities, located either in municipally-owned buildings or in buildings owned by housing associations where the municipalities are stakeholders. As of September 30, 2023, the size of Wałbrzych's municipal housing stock, according to the "Multiannual Housing Stock Management Program for 2024–2028", comprised:

1. Buildings fully owned by the municipality: 659 buildings, 4392 housing units, with a total usable area of 195,696.21 m²;
2. Buildings owned by housing associations with municipal participation: 1653 buildings, 6353 housing units, with a total usable area of 276,618.24 m².

Since 2015, a noticeable decline in the share of municipal housing stock has occurred, both in fully municipally-owned properties and in those co-owned by housing associations, favoring private ownership.

The total number of municipally-owned buildings in Wałbrzych amounts to 659, with the highest concentration in the Podgórze district (138 buildings), followed by Biały Kamień (105 buildings). Meanwhile, housing association buildings with municipal participation total 1653, with Śródmieście hosting the highest number (293 buildings), followed by Biały Kamień (291 buildings).

The municipal housing stock of Jelenia Góra, as of September 30, 2023, according to the "Multiannual Housing Stock Management Program for 2019–2026", comprised:

1. Buildings fully owned by the municipality: 153 buildings, 1133 housing units;
2. Buildings owned by housing associations with municipal participation: 668 buildings, 1381 housing units;
3. The total usable area of municipally-owned housing units: 110,960 m².

Here too, there is a noticeable decline in the share of municipal housing stock and housing in buildings co-owned by housing associations, both favoring private ownership.

As of the end of 2022, approximately 90.75% of buildings owned by Wałbrzych Municipality were constructed before 1945. A similar situation is observed in Jelenia Góra. The buildings in both cities are generally in average to poor technical condition, and a significant portion of the units are non-functional, lacking kitchens and bathrooms, with sanitary facilities located in stairwells (Table 1).

In Wałbrzych, most dwellings within the municipal housing stock – predominantly those constructed before 1945 – are connected to the municipal water supply system. Over the years, the level of access to running water has remained relatively stable at approximately 99%. Other types of installations, such as bathrooms and central heating systems, show a clear improvement in availability over time. In 2015, 82.1% of municipal dwellings were equipped

✉maria.heldak@upwr.edu.pl, ✉alina.kulczyk-dynowska@upwr.edu.pl, ✉anna.nowel-smigaj@upwr.edu.pl, ✉katarzyna.przybyla@upwr.edu.pl

Table 1. Amenities and Equipment of Housing Units in Jelenia Góra by Construction Year (multiple answers possible)

Facilities and equipment in the apartment	Year of construction		p
	built before 1975 [%]	built after 1975 [%]	
Hot water available	87.5	91.8	0.505
Cold water only	6.3	4.9	0.787
Central heating	68.8	57.4	0.285
Tiled stove heating	25.0	27.9	0.767
Electric heating	3.1	14.8	0.085
Shared toilet located in the stairwell	18.8	23.0	0.639
Toilet and bathroom inside the dwelling	78.1	57.4	0.047
No bathroom in the dwelling	6.3	0.0	0.048
Gas from the grid	34.4	39.3	0.638
Other heating type	0	1.6	0.466

Source: own elaboration.

with a bathroom, and in subsequent years this share increased slightly by 0.1%. By 2019, bathroom access had reached 82.6%. Despite this upward trend, the level of bathroom availability remains insufficient from the perspective of tenants, particularly individuals with mobility impairments. With respect to central heating, only 72.9% of dwellings were equipped with such installations in 2015. A gradual improvement was also observed in this area, with availability rising to 73.5% in 2019.

According to the municipal housing register as of 30 June 2019, the following deficiencies in housing equipment and conditions were recorded:
- 5080 dwellings lacked an in-unit toilet;
- 126 dwellings had toilet facilities located outside the building;
- 6030 dwellings were not equipped with a bathroom;
- 46 dwellings were located in basements or semi-basements;
- 167 dwellings lacked water and sewage installations;
- 192 dwellings were equipped with windowless (dark) kitchens.

In the years 2019–2021, a total of 26 tenement buildings were demolished in Wałbrzych, with more than ten additional buildings dismantled in each subsequent year. Over the span of a decade, the number of demolished tenement houses exceeded one hundred. The primary reason for these demolitions was the poor technical condition of the buildings.

In both cities, municipal housing is characterized by significant depreciation and low levels of communal amenities. Many apartments are non-functional, lacking kitchens and bathrooms, with toilets located in stairwells. In Wałbrzych, only 5.2% of the total building stock was constructed between 1945 and 1978, and just 4.13% after 1980. The municipal housing stock is marked by severe technical wear. Comparable research conducted in Wrocław (Hełdak et al., 2024a) highlighted the extreme inadequacy of municipal housing in meeting contemporary

Table 2. Technical Condition of Municipal Housing Stock in Wałbrzych and Jelenia Góra

City	Details	Pcs.	Technical wear and tear of buildings				
			Good condition 0–15.00%	Satisfactory condition 15.00–30.00%	Average condition 30.01–50.00%	Poor condition 50.01–70.00%	Bad condition 70.01–100.00%
Wałbrzych	Number of buildings	501	37	52	269	120	23
	Part:	100%	7.39	10.38	53.69	23.95	4.59
Jelenia Góra	Number of buildings	821	7	78	558	159	19
	Part:	100%	0.80	9.50	68.00	19.40	2.30

Source: own elaboration based on *Multiannual Program for the Management of the Municipal Housing Stock of the Wałbrzych Commune for 2024–2028* (2023) and *Multiannual Program for the Management of the Municipal Housing Stock of the City of Jelenia Góra for 2020–2026* (2019).

✉maria.heldak@upwr.edu.pl, ✉alina.kulczyk-dynowska@upwr.edu.pl, ✉anna.nowel-smigaj@upwr.edu.pl, ✉katarzyna.przybyla@upwr.edu.pl

equipment standards. The primary reasons for this include a lack of funding for building renovations (as these are typically low-rent regulated units), structural obstacles inherent to older buildings, or the lack of cost-effectiveness in renovating severely depreciated structures.

Essential actions to improve the condition of the housing stock involve identifying actual renovation needs. Based on technical inspections conducted in 2022–2023 in compliance with building regulations, the condition of the housing stock can be categorized as follows (Table 2).

Buildings constructed before 1945, due to their age (typically over 100 years) and structural characteristics, are the most deteriorated and susceptible to physical degradation. The most common causes of building deterioration, necessitating extensive renovations, include:

– Rainwater infiltration due to inadequate drainage (causing wall cracking);
– Lack of horizontal and vertical insulation and degradation of old drainage systems (leading to damp walls, floors, fungal growth, structural weakening, and wall damage) (Figs. 2–3);

Fig. 2. Lack of horizontal and vertical insulation and degradation of old drainage systems, Jelenia Góra, Wojska Polskiego Av.
Source: own photography.

Fig. 3. Lack of horizontal and vertical insulation and degradation of old drainage systems, Jelenia Góra, Kasprowicza St.
Source: own photography.

✉maria.heldak@upwr.edu.pl, ✉alina.kulczyk-dynowska@upwr.edu.pl, ✉anna.nowel-smigaj@upwr.edu.pl, ✉katarzyna.przybyla@upwr.edu.pl

– Unauthorized construction work, such as creating additional wall openings or constructing sanitary facilities without proper insulation (Fig. 4);
– Poor condition of water and sewage systems, lack of sanitary sewage connections, and insufficient ventilation.

Most buildings require renovations of staircases, facades, windows, doors, and sanitary installations. The technical wear of building components is accompanied by functional deficiencies; for example, many buildings still feature shared toilets located in stairwells (Fig. 5).

Based on the inspection of buildings and review of the photographs, it can be concluded that the housing resources are degraded, but the buildings in their glory (at the turn of the 19th and 20th centuries) represented high-class housing facilities. Through centuries of neglect, they fell into ruin, which translates into lower housing standards for their residents.

The Wałbrzych Municipality housing stock includes 120 buildings classified as being in poor condition (with wear levels ranging from 50.01% to 70%) and 23 buildings in very poor condition, with

Fig. 4. Unauthorized construction work – chimney sticking out of the window after installing heating. Jelenia Góra, Ogrodowa St.
Source: own photography.

Fig. 5. Buildings requiring facade renovation, insulation, replacement of windows and doors, Jelenia Góra, Powstańców Wielkopolskich St.
Source: own photography.

✉maria.heldak@upwr.edu.pl, ✉alina.kulczyk-dynowska@upwr.edu.pl, ✉anna.nowel-smigaj@upwr.edu.pl, ✉katarzyna.przybyla@upwr.edu.pl

wear levels assessed between 70.01% and 100%. In Jelenia Góra, 159 buildings were classified as being in poor condition, and 19 as being in very poor technical condition.

Recognition of the Need for the Elimination of Architectural and Technical Barriers and Housing Conditions

The housing problem in Wałbrzych and Jelenia Góra, particularly regarding architectural and technical barriers, is significant, as a large part of the cities' housing stock comprises pre-war tenement buildings. Few of these buildings have any facilities to mitigate mobility barriers; moreover, their technical condition is often rated as "poor". An essential element for individuals using wheelchairs or crutches and residing above the first floor is an elevator, which is rarely found even in post-war buildings.

As of 2018, Wałbrzych had a total of 25 housing units specifically designated for wheelchair users. Given the high demand and insufficient supply, the municipality planned to add 10 such units between 2019 and 2023. These units, due to their specific purpose for a narrow group of users, are intended solely for rental and excluded from sale. In Jelenia Góra, there is no information about housing units with accessibility features for individuals with mobility impairments. The housing fabric in the city center predominantly consists of buildings constructed before 1945, which require extensive renovation.

To better understand the needs of the older adults (including disabled individuals) and assess their current living conditions in Wałbrzych and Jelenia Góra, surveys were conducted directly with tenants of municipal housing. Respondents were asked about mobility aids and barriers, both within their apartments and in their residential surroundings, focusing on the condition, standards, and adaptations of their housing to their mobility needs. The surveys utilized data from a broader study conducted in Wałbrzych as part of a thesis by Detyna (2021) and a separate survey in Jelenia Góra.

The first question: "Does the functioning of older adults involve certain limitations regarding their mobility and daily activities?", aimed to understand respondents' general perceptions of daily life and mobility limitations among the older adults. The majority of respondents in Wałbrzych believed these limitations were significant: 38 individuals (82%) responded "definitely yes", and 7 individuals (14%) responded "rather yes". Only two individuals (4%) were uncertain, and none responded "definitely no" or "rather no".

Similarly, in Jelenia Góra, most respondents believed that mobility limitations affected the daily lives of older people. A total of 53 respondents (57%) answered "definitely yes", and 33 respondents (35.5%) answered "rather yes". The remaining respondents were either neutral or disagreed: 4 individuals (4.35%) answered "no opinion", 3 individuals (3.2%) responded "rather no", and none selected "definitely no".

The next question focused on identifying the demand for facilities that should be included in municipal housing to facilitate mobility (Table 3). In Jelenia Góra, respondents most frequently believed that adapted bathrooms or toilets (58.1%) should be prioritized in housing units to improve mobility. Slightly less common suggestions included anti-skid floors (29%), adapted floor thresholds (28%), various grab rails and handrails (18.3%), additional handrails along walls (7.3%), and widened door frames (15.1%). Few respondents indicated the need for lifting equipment (2.2%), elevators (2%), floors with varied textures and colours (1.1%), or ramps (6.5%). In Jelenia Góra, a total of 10 respondents reported the need for stair-climbing aids (mechanical devices facilitating movement on stairs).

In Wałbrzych, a significant number of respondents (33 out of the 50 respondents) expressed the need for widened door frames in their homes, followed closely by the need for bathroom adaptations tailored to their individual requirements (32 respondents). Furthermore, 30 respondents indicated the need for grab rails and handrails, while 15 respondents emphasized the need for adapted floor thresholds.

✉maria.heldak@upwr.edu.pl, ✉alina.kulczyk-dynowska@upwr.edu.pl, ✉anna.nowel-smigaj@upwr.edu.pl, ✉katarzyna.przybyla@upwr.edu.pl

Table 3. Facilities Desired for Mobility Support in Housing Units (multiple answers possible)

Facility	Place of residence					
	Total		Jelenia Góra		Wałbrzych	
	N	%	N	%	N	%
Adapted bathrooms or toilets	86	60.13	54	58.1	32	64
Anti-skid floors	40	27.97	27	29.0	13	26
Adapted floor thresholds	41	28.67	26	28.0	15	30
Various grab rails and handrails	47	32.86	17	18.3	30	60
Additional handrails along the walls	7	4.89	7	7.5	0	0
Extended door frames	47	32.86	14	15.1	33	66
Lifting equipment	8	5.59	2	2.2	6	12
Elevators	10	6.99	2	2.2	8	16
Different texture and colour floors	7	4.89	1	1.1	6	12
Ramps	12**	8.39	6	6.5	6	12
None of the above	14	9.79	14	15.1	0	0
Other	0	0	0	0	0	0

Source: own elaboration.

Anti-skid floors were considered necessary by 13 respondents, and 8 indicated a need for lifting equipment. Finally, 6 respondents each highlighted the need for ramps, floors with varied textures and colors, and other lifting devices. None of the respondents chose "additional handrails along walls", "none of the above", or "other".

Solutions Adopted in Municipal Policy

As noted by Cendrowicz (2023), municipalities, as one of the pillars of a democratic state governed by the rule of law and a form of public administration decentralization, play a critical role in delivering public services. Municipalities serve as the first point of contact for residents' everyday affairs, provide a sense of community identity, and offer assistance in crisis situations. Statutorily assigned tasks emphasize the decisive role municipalities play in addressing the needs of the most vulnerable populations, including older adults and individuals with disabilities.

The *Multiannual Program for the Management of the Municipal Housing Stock of the Wałbrzych Commune for 2024–2028* (Resolution No. LXXIII/745/23 of 28 November 2023), includes a long-term policy related to the rational management of municipal housing stock, encompassing its sale, further development, and renovations. The estimated value of necessary construction works, based on technical inspections, resident complaints and interventions, and mandates from the County Building Supervision Inspectorate for the city of Wałbrzych, is substantial and exceeds the financial capabilities of the municipality. According to a renovation needs plan for the municipal housing stock for 2023, approximately PLN 133 million (30,947,105.00 EUR) would be required to renovate the entire stock. Over the coming years, Wałbrzych Municipality will not have sufficient funds to carry out all the required renovations in its municipal buildings. Renovation works are being conducted gradually with the support of the National Development Fund, the European Investment Bank, and the European Bank for Reconstruction and Development.

This project, titled "Improving the Energy Efficiency of Municipal Buildings in Wałbrzych through Thermal Modernization and Replacement of Heat Sources", will cost approximately PLN 138 million and is financed in part by the European Bank for Reconstruction and Development. Modernization works on municipal residential buildings, including roof repairs, facade renovations with thermal insulation, replacement of windows and doors, installation of moisture-proof insulation, and heating system upgrades.

This project, also titled "Improving the Energy Efficiency of Municipal Buildings in Wałbrzych through Thermal Modernization and Replacement of Heat Sources", is financed by the European Investment Bank between 2023–2026, with a budget of approximately PLN 51 million. In these buildings, the functional layout of residential units will be modified. Apartments will be equipped with bathrooms and adapted to meet the needs of residents and current

✉maria.heldak@upwr.edu.pl, ✉alina.kulczyk-dynowska@upwr.edu.pl, ✉anna.nowel-smigaj@upwr.edu.pl, ✉katarzyna.przybyla@upwr.edu.pl

standards. Additionally, elevators will be installed to improve accessibility.

According to the declaration by the Wałbrzych Municipality, it has 44 housing units adapted for wheelchair users. In the coming years, the municipality plans to increase the stock of such housing by an additional 10 units, bringing the total to 54 adapted apartments. These units are excluded from sale to ensure their availability for the intended tenants.

An interesting initiative by the Wałbrzych city authorities is the creation of shared spaces within municipal housing stock, particularly for older adults, to serve health and social purposes. These spaces are coordinated by local non-governmental organizations and Social Economy Entities. This initiative responds to socio-demographic challenges and urban development trends, particularly in "small cities". The goal is to enhance accessibility and facilitate the functioning of individuals within neighborhood or street block communities, especially older adults and families with children. Aligning with this trend supports extending the period of independent living for city residents in their homes.

In the *Multiannual Program for the Management of the Municipal Housing Stock of the City of Jelenia Góra for 2020–2026* (Resolution No. 172.XV.2019 of 18 December 2019), no specific measures were found aimed at improving housing conditions for older adults and individuals with disabilities. Actions in this area are conducted under general provisions stemming from the Act of June 21, 2001, on the Protection of Tenants' Rights, Municipal Housing Stock, and Amendments to the Civil Code (consolidated text, Journal of Laws of 2023, item 725).

DISCUSSION

The conducted research allowed for answers to the research questions posed at the beginning of the study. It was established that the standard and equipment of municipal housing in Jelenia Góra and Wałbrzych do not meet the living needs of older adults in certain parts of the housing stock. The primary issue for individuals with mobility limitations remains the poor functionality of housing, which often lacks access to kitchens and bathrooms, with sanitary facilities located in stairwells. This corroborates the hypothesis that the demand for housing adaptations to meet the needs of individuals with mobility limitations is predominantly expressed by tenants of municipal housing. The underinvestment in municipal housing – manifesting in limited access to utilities and inadequate equipment – has been underscored by Hełdak et al. (2024b).

The Wałbrzych Municipality housing stock includes 120 buildings classified as being in poor condition (with wear levels ranging from 50.01% to 70%) and 23 buildings in very poor condition, with wear levels assessed between 70.01% and 100%. In Jelenia Góra, 159 buildings were classified as being in poor condition, and 19 as being in very poor technical condition. In both cities, a significant portion of residential buildings, due to their age and prolonged neglect, require comprehensive renovation. The quality and suitability of housing for older adults are crucial factors for their quality of life and are decisive in determining whether they can remain in their homes if they become dependent (Cullen et al., 2007; Fox et al., 2017).

The conducted surveys provided an answer to the question: Is the demand for housing adaptations to meet the needs of older adults and people with disabilities a significant issue for respondents? Respondents primarily indicated the need for adapted bathrooms or toilets. A total of 60.13% of the 143 participants expressed the desire for improved housing conditions in this area (86 individuals). Other identified needs included various grab rails and handrails (47 respondents, 32.86%), anti-skid floors (40 respondents, 27.97%), adapted floor thresholds (41 respondents, 28.67%), and widened door frames (47 respondents, 32.86%). This finding aligns with prior research conducted in the Lower Silesian Voivodeship by Kurtyka-Macak et al. (2019), which determined that the number of individuals requiring, but lacking, such facilities significantly exceeds those who both need and possess them.

✉maria.heldak@upwr.edu.pl, ✉alina.kulczyk-dynowska@upwr.edu.pl, ✉anna.nowel-smigaj@upwr.edu.pl, ✉katarzyna.przybyla@upwr.edu.pl

Separate analyses examined how Wałbrzych and Jelenia Góra address the problem of architectural and technical barriers and improve the quality of life for municipal housing tenants. An analysis of the multiannual housing stock management programs for these cities revealed that Wałbrzych has an almost exemplary housing policy. The city has ambitious plans for renovating municipal housing buildings, supported by European funds. These plans include improving the functionality of apartments, adding bathrooms and toilets to units, and installing elevators in buildings. Wałbrzych also organizes spaces that allow older adults and socially isolated individuals to meet and interact.

In contrast, Jelenia Góra's *Multiannual Program for the Management of the Municipal Housing Stock* (2019) does not include provisions for apartments designed for individuals with disabilities, nor does it outline a plan for renovation works. These tasks are addressed based on general legislative requirements.

The study encountered certain limitations. The scale of the research did not allow for a detailed inventory of buildings and premises, and the authors had to rely on the available information regarding the municipal housing stock in Wałbrzych and Jelenia Góra. Conducting a building audit with the involvement of an occupational therapist, focusing on older adults with disabilities, could constitute a valuable continuation of the research on a more specific population.

CONCLUSIONS

The conducted research provided answers to the research questions and led to the following conclusions:

1. The progressive depreciation of housing fabric in Polish inner-city zones poses a significant problem for local authorities. Many residential buildings were constructed before 1945 and have not undergone modernization for decades.
2. The standard of living in residential buildings from the early 20th century in Poland is generally very low. Residents with higher incomes tend to move to newer housing estates, leaving lower-income residents, retirees, and pensioners, who cannot afford renovations or relocation, in these zones. This exacerbates social issues.
3. Research conducted in Wałbrzych and Jelenia Góra revealed deficiencies in apartment equipment and significant technical wear of buildings.
4. Analysis of spatial policies and other planning documents indicates efforts to address the problems of housing fabric depreciation. Spatial policy should guide the further development and transformation of inner-city residential buildings to counteract their degradation.
5. Local authorities should implement measures to prevent the emergence of excluded residential zones within cities.

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REFERENCES

Andrzejewski, A. (1987). *Polityka mieszkaniowa* [*Housing policy*]. Państwowe Wydawnictwo Ekonomiczne.

Cendrowicz, D. (2023). Świadcząca rola gminy w zakresie zaspokajania potrzeb mieszkaniowych członków wspólnoty samorządowej [The providing role of municipality in fulfilling the housing needs of self-governed community]. *Ius Et Administratio*, *2*(51). https://doi.org/10.15584/iuseta.2023.2.3

Cullen, K., Delaney, S., & Dolphin, C. (2007). *The role and future development of supportive housing for older people in Ireland (National Council on Ageing and Older People, Report No. 102)*. Stationery Office. http://hdl.handle.net/10147/314974

Detyna, S. (2021). *Potrzeby mieszkaniowe osób starszych, a zasoby mieszkaniowe gminy na przykładzie miasta Wałbrzycha* [*Housing needs of the older adults and the housing resources of the commune on the example of the city of Wałbrzych*]. Master's thesis done at

✉maria.heldak@upwr.edu.pl, ✉alina.kulczyk-dynowska@upwr.edu.pl, ✉anna.nowel-smigaj@upwr.edu.pl, ✉katarzyna.przybyla@upwr.edu.pl

the Wrocław University of Environmental and Life Sciences, Faculty of Environmental Engineering and Geodesy.

Fox, S., Kenny, L., Day, M. R., O'Connell, C., Finnerty, J., & Timmons, S. (2017). Exploring the Housing Needs of Older People in Standard and Sheltered Social Housing. *Gerontology & Geriatric Medicine*, *3*, 2333721417702349. https://doi.org/10.1177/2333721417702349

Gąciarz, B., & Bartkowski, J. (2014). Położenie społeczno-ekonomiczne niepełnosprawnych w Polsce na tle sytuacji osób niepełnosprawnych w krajach Unii Europejskiej [Social and economic situation of persons with disabilities in Poland compared to the situation of the disabled in European]. *Niepełnosprawność – Zagadnienia, Problemy, Rozwiązania, II/2014(11)* [*Disability – Issues, Problems, Solutions, II/2014(11)*], 20–43.

Hełdak, M., Stacherzak, A., & Przybyła, K. (2018). Demand and Financial Constraints in Eliminating Architectural and Technical Barriers for People with Disabilities in Poland. *Journal of Healthcare Engineering*, 1297396. https://doi.org/10.1155/2018/1297396

Hełdak, M., Kulczyk-Dynowska, A., Przybyła, K., Stacherzak, A., Szczepański, J., Michalik, M., Płuciennik, M., & Kempa, O. (2024a). Standards and the demand for adapting apartments for better accessibility for older adults in Poland. *Journal of Housing and the Built Environment, 39*, 937–956. https://doi.org/10.1007/s10901-023-10048-8

Hełdak, M., Stacherzak, A., Przybyła, K., Kulczyk-Dynowska, A., Płuciennik, K., Szczepański, J., Kempa, O., & Lipsa, J. (2024b). The form of residential premises ownership vs. residential standard of seniors in Poland in the opinion of residents. *Real Estate Management and Valuation, 32*(1), 114–125. https://doi.org/10.2478/remav-2024-0012

Hutnik, R., & Jastrząb, A. (2015). Dolnośląskie Zagłębie Węglowe – upadek, czy szansa? [Lower Silesian Coal Basin – a decline or an opportunity?]. In T. Przylibski (Ed.), *III Polski Kongres Górniczy – rozszerzone abstrakty* [*III Polish Mining Congress – extended abstracts*] (pp. 489–490). Wrocław University of Science and Technology.

Kopeć, B. (1983). *Metodyka badań ekonomicznych w gospodarstwach rolnych* [*Methodology of economic research on farms*]. Skrypt Akademii Rolniczej we Wrocławiu, 269, 7–277.

Kulczyk-Dynowska, A. (2017). Nieruchomości mieszkalne w dolnośląskich miastach na prawach powiatu – wybrane aspekty [Residential real estates in Lower Silesian cities with county rights – selected aspects]. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu*, *492*, 28–36. https://doi.org/10.15611/pn.2017.492.03

Kurtyka-Marcak, I., Hełdak, M., & Przybyła, K. (2019). The Actual Demand for the Elimination of Architectural Barriers among Senior Citizens in Poland. *International Journal of Environmental Research and Public Health*, *16*(14), 2601. https://doi.org/10.3390/ijerph16142601

Lawler, K. (2001). *Aging in place: Coordinating housing and health care provision for America's growing elderly population*. Joint Center for Housing Studies of Harvard University. https://citeseerx.ist.psu.edu/viewdoc/download;jsessionid=A4F5867ED71A81062AD110EC07BB4CA2?doi=10.1.1.632.3357&rep=rep1&type=pdf

Piatkowski, M. (2018). *Europe's Growth Champion. Insights from the Economic Rise of Poland.* Oxford University Press.

Przybyła, K. (2015). *The impact of the polish administrative reform on the central functions of Lower Silesian cities.* Hradec Economic Days 2015, Economic Development and Management of Regions, part V, University of Hradec Kralove.

Przybyła, K., Hełdak, M., & Kurtyka-Marcak, I. (2019). Demand for a Housing Offer Addressed to Senior Citizens in Poland. *International Journal of Environmental Research and Public Health*, *16*(22), 4573. https://doi.org/10.3390/ijerph16224573

Raszkowski, A., & Bartniczak, B. (2019). On the Road to Sustainability: Implementation of the 2030 Agenda Sustainable Development Goals (SDG) in Poland. *Sustainability*, *11*(2), 366. https://doi.org/10.3390/su11020366

Stachak, S. (1978). *Metody nauk ekonomiczno-rolniczych w zarysie* [*Methods of economic and agricultural sciences in outline*]. Skrypt Akademii Rolniczej w Szczecinie, 48–86.

Sixsmith, A., & Sixsmith, J. (2008). Ageing in place in the United Kingdom. *Ageing International, 32,* 219–235. https://link.springer.com/article/10.1007/s12126-008-9019-y#citeas

Statistics Poland, Local Data Bank. *Population. Size and structure and vital statistics in Poland by territorial division in 2024. As of 30 June*. https://stat.gov.pl/

✉maria.heldak@upwr.edu.pl, ✉alina.kulczyk-dynowska@upwr.edu.pl, ✉anna.nowel-smigaj@upwr.edu.pl, ✉katarzyna.przybyla@upwr.edu.pl

obszary-tematyczne/ludnosc/ludnosc/ludnosc-stan-i-struktura-ludnosci-oraz-ruch-naturalny-w-przekroju-terytorialnym-w-2024-r-stan-w-dniu-31-12,6,38.html

Studium uwarunkowań i kierunków zagospodarowania przestrzennego miasta Wałbrzycha (Uchwała Rady Miejskiej Wałbrzycha Nr XII/107/19 z dnia 27 czerwca 2019 r.) [Study of the Conditions and Directions of Spatial Development of the City of Wałbrzych, Resolution of the Wałbrzych City Council No. XII/107/19 of June 27, 2019], Wałbrzych.

Ustawa z dnia 8 marca 1990 r. o samorządzie gminnym (tekst jedn. Dz. U. 2024, poz. 1465) [Act of 8 March 1990 on local government (consolidated text, Journal of Laws of 2024, item 1465)]. (Poland)

Ustawa z dnia 21 czerwca 2001 r. o ochronie praw lokatorów, mieszkaniowym zasobie gminy i o zmianie Kodeksu cywilnego (tekst jedn. Dz.U. z 2023 r., poz. 725) [Act of June 21, 2001, on the Protection of Tenants' Rights, Municipal Housing Stock, and Amendments to the Civil Code (consolidated text, Journal of Laws of 2023, item 725)]. (Poland)

Van Hoof, J., Kazak, J. K., Perek-Białas, J. M., & Peek, S. T. M. (2018). The Challenges of Urban Ageing: Making Cities Age-Friendly in Europe. *International Journal of Environmental Research and Public Health*, *15*(11), 2473. https://doi.org/10.3390/ijerph15112473

Van Hoof, J., & Kazak, J. K. (2018). Urban Ageing. *Indoor and Built Environment*, *27*(5), 583–586. https://doi.org/10.1177/1420326X18768160

Van Hoof, J., Marston, H. R., Kazak, J. K., & Buffel, T. (2021). Ten questions concerning age-friendly cities and communities and the built environment. *Building and Environment*, *199*, 107922. https://doi.org/10.1016/j.buildenv.2021.107922

Wieloletni Program Gospodarowania Zasobem Mieszkaniowym Gminy Wałbrzych na lata 2024–2028 (Uchwała Nr LXXIII/745/23 z dnia 28 listopada 2023 r.) [*Multiannual Program for the Management of the Municipal Housing Stock of the Wałbrzych Commune for 2024–2028* (Resolution No. LXXIII/745/23 of 28 November 2023)].

Wieloletni program gospodarowania mieszkaniowym zasobem Miasta Jelenia Góra na lata 2020–2026 (Uchwała Nr 172.XV.2019 z dnia 18 grudnia 2019 r.) [*Multiannual Program for the Management of the Municipal Housing Stock of the City of Jelenia Góra for 2020–2026* (Resolution No. 172.XV.2019 of 18 December 2019)].

Wiles, J. L., Leibing, A., Guberman, N., Reeve, J., & Allen, R. E. (2012). The meaning of "aging in place" to older people. *The Gerontologist*, *52*(3), 357–366. https://doi.org/10.1093/geront/gnr098

Wojtkowiak-Jakacka, M., & Girul, A. (2017). *Sytuacja demograficzna województwa dolnośląskiego – stan obecny i perspektywy* [*Demographic situation of the Lower Silesia Voivodship – current status and prospects*]. In J. Hrynkiewicz, & A. Potrykowska (Eds.), *Sytuacja demograficzna Dolnego Śląska jako wyzwanie dla polityki społecznej i gospodarczej* [*Demographic situation of Lower Silesia as a challenge for social and economic policy*] (Vol. 15, p. 31). Rządowa Rada Ludnościowa. https://bip.stat.gov.pl/files/gfx/bip/pl/defaultstronaopi-sowa/806/1/1/sytuacja_ demograficzna_dolnego_slaska.pdf

✉maria.heldak@upwr.edu.pl, ✉alina.kulczyk-dynowska@upwr.edu.pl, ✉anna.nowel-smigaj@upwr.edu.pl, ✉katarzyna.przybyla@upwr.edu.pl