



DESIGNING CITIES FOR FUTURE SENIORS

PROJEKTOWANIE MIAST DLA PRZYSZŁYCH SENIORÓW

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Abstract

This paper presents the results of research conducted at the (Faculty of Architecture, Poznan University of Technology) in the area of urban design geared towards the new needs of ageing residents. The first part presents the original proposal of a typology of residential environments for seniors based on own research, supported by the realisations of architectural objects in the last 15 years in Poland and worldwide. Then, the article also draws on research carried out on a group of over 800 young residents of Poznań to assess the potential of architectural and urban space to support health and living comfort, referring to the basic functional and spatial needs of the living environment for seniors. The text is accompanied by an introduction describing the contemporary conditions and historical context related to senior housing in Poland.

Keywords: aging societies, quality of life, city, residential units

Streszczenie

W artykule przedstawiono wyniki badań prowadzonych (na Wydziale Architektury w Politechnice Poznańskiej) w obszarze projektowania urbanistycznego ukierunkowanego na nowe potrzeby starzejących się mieszkańców. W pierwszej części omówiono autorską propozycję typologii środowiska zamieszkania dla seniorów w oparciu o badania własne, poparte realizacjami obiektów architektonicznych z ostatnich 15 lat w Polsce i na świecie. W dalszej części artykułu przedstawiono badania przeprowadzone na grupie ponad 800 młodych mieszkańców Poznania w celu oceny potencjału przestrzeni architektoniczno-urbanistycznej do wspierania zdrowia i komfortu życia, odnosząc się do podstawowych potrzeb funkcjonalno-przestrzennych środowiska życia seniorów. Tekstowi towarzyszy wprowadzenie opisujące współczesne uwarunkowania i kontekst historyczny związany z mieszkalnictwem senioralnym w Polsce.

Słowa kluczowe: starzejące się społeczeństwa, jakość życia, miasto, moduły mieszkalne

1. INTRODUCTION

„Affordable housing is an issue that is not only important for politicians and architects, it is not just aimed at the poorest, and housing policy is not about the culture of handouts and has many non-financial tools at its disposal. It is high time to change the way we talk about housing” [1][authors’ translation].

Analysing the housing environment, it is important to note that the main attention of public authorities and spatial planners is directed towards meeting the housing needs of people of reproductive age. This is

certainly due to the demographic collapse observed in Europe, including Poland. For example, in our country, housing programmes for the young, such as “Housing for the young”, “Family on their own” etc., are being launched. In contrast, less attention is paid to identifying the housing needs of the elderly and the resulting challenges facing housing policy in the context of healthy ageing [2]. At this point, it is impossible to ignore the historical conditions related to the contemporary attitude to the phenomenon of old age. According to the authors, this attitude developed

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in two historical periods that had the greatest impact on the perception of old age in Western culture. In ancient Greece, elderly people who needed care relied on their children or extended family. Athenian law required children to look after their ageing parents, and the penalty for neglecting this duty was to deprive the guilty of citizenship. This was, next to the death penalty, the second most severe sanction for Athenians. The elderly enjoyed great authority. The Spartans appointed a council of elders, called the Gerusia, which was the most important governing body consisting of 30 men over the age of 60. The council also acted as a supreme court with the power to overturn decisions made by the Spartan assembly. This seemingly unrelated information directly related to the title of the chapter provides a basis for understanding that in ancient Greece old people enjoyed a very high degree of authority, which was directly related to the environment of their residence under the caring care of their family.

Similarly, in ancient Rome, old age was equated with wisdom and prestige. Cicero, in his treatise *On Old Age*, wrote: “For what is more agreeable than an old age surrounded by the enthusiasm of youth? Or do we not concede to old age even strength enough to instruct and train young men and equip them for every function and duty? And what more exalted service can there be than this?”; “[...] and no teachers of the liberal arts should be considered unhappy, even though their bodily vigour may have waned and failed” [3].

Seneca [4] saw old age as a period that prompts man to reflect on the consequences of his deeds and choices, to reassess his achievements in life. The widespread respect for old age and the familial care of seniors meant that there was no practical need in ancient Rome for specialised places equivalent to today’s nursing homes for the elderly. This situation changed dramatically after the fall of the Roman Empire. Shahar [5] draws attention to the specific approach to old age in medieval Europe. This approach flowed directly from the Scriptures, where old people were not directly mentioned among those who deserved help. Records of due support referred to widows, orphans, the sick and the lame (incapacitated), but not to old people. In medieval Europe, the old man was most often alone.

It is noteworthy that old age was treated differently depending on gender and social position, with old age generally being viewed unfriendly. This is confirmed, for example, by the Latin terms used by Jan Długosz [6]

to refer to old age: “gnarled old age” (*decrepita aetas*), “burdened with senile impotence” (*morbo et senio gravatus*), “weary of age” (*senio confectus*). Against this backdrop, old age was particularly difficult for women, who, as incapable of procreation, were treated with contempt and even hostility. This is well reflected in the pejorative medieval term “old woman” (*vetula*) in relation to older women [7]. In medieval literature, an old woman was very often portrayed as a false person, accused of witchcraft, magic, casting charms, to be feared. Images of old women can be found that had the grotesque repulsive forms of toothless and limping figures [8]. This negative attitude to old age even applied to rulers, who were reproached for their infirmity, which provided a pretext for younger successors to take over the reigns [9].

It is in this attitude that the origins of the segregated places where the elderly could find refuge can be traced. Although the idea of Christian charity called for people in need to be cared for, access to hospitals was severely restricted and these institutions were not directly intended for the elderly. Over time, secular authorities made an effort to organise care for seniors who were lonely and destitute. “Refuges”, “homes for the poor” and “old people’s homes” did not enjoy a good reputation until the end of the 19th century. The senior citizens living there were segregated by gender, often forced to wear uniform clothing and underwear, and had to participate in the work of maintaining the refuge. Conditions in these places were certainly not good.

It is easy to see that the need to organise institutionalised forms of care for the elderly, separated from the rest of society, is linked to the negative attitude to old age developed in the Middle Ages. Paradoxically, when we compare this attitude with modern times, we find many common features. In contrast to antiquity, when old age was identified with wisdom and authority, in modern society (just as in the Middle Ages) we still encounter symptoms of age discrimination. This can be seen in the market for consumer goods and advertising, which for a long time targeted mainly young people, or in the academic restrictions in the Polish higher education system, which discriminate against older, experienced scientists. It may not be surprising that social care homes for the elderly, isolated from society, still evoke very negative associations and are not identified with healthy ageing environments. Research carried out at the Institute of Public Affairs by Bojanowska

[10] shows that only 0.5 per cent of respondents in Poland allow the prospect of living in a state or local government nursing home in their old age. This data is in line with results from other European countries. As can be seen from the research already presented, the most preferred forms of care for seniors are solutions that provide opportunities for these people to remain in their natural surroundings, which is also confirmed by the original research presented in Chapter 3. Here we turn to further types of residential environment that provide such opportunities. These solutions, on the one hand, provide a sense of non-exclusion, independence and self-reliance and, on the other hand, create opportunities for healthy ageing.

The following types of housing environment are distinguished:

- strictly senior architecture;
- controlled social-mix;
- synergic habitat: creative partnership between generations;
- assisted housing for the elderly;
- creative co-housing;
- care farms [11].

When talking about the current state of senior citizens' housing, it is important to bear in mind that the vast majority of them use the dwellings in which they have spent their previous lives [12]. Most of these were designed without taking into account the specific needs of a particular type of user. In such housing structures, both the very young, the middle-aged and senior citizens reside. The form of the building itself, its type, is of little relevance here, whether it is a prefabricated housing estate or a townhouse in the centre of a large city. Today, the majority of older people live in these types of buildings, which were not intended to be designed for senior citizens.

A diverse social cross-section is naturally formed in such complexes, which facilitates older people's existence by creating communities and closer neighbourly relations. However, in many cases, due to various mechanisms of urban transformation, e.g. urban sprawl, this efficient social structure breaks down among the inhabitants of such buildings, as exemplified by the depopulated council tenements, where the remaining tenants tend to be seniors. Younger generations are eager to move to the suburbs, and the type of family functioning is also changing; it is becoming increasingly rare to find multi-generational families, with two generations

living together. Therefore, older people live alone in inadequately sized flats. The quality of the space they live in is greatly reduced, the excess space, previously occupied by several families, proves costly to use, so the running costs far exceed the financial possibilities of senior citizens. The lack of lifts, platforms, wide accesses and ramps to the building makes them an involuntary trap for the elderly over time. As seniors' abilities decrease, buildings do not support them in their daily lives and even make it impossible to be independent and function independently in their homes.

2. RESEARCH METHODS

This research process adopted a two-stage procedural model. The first stage used the method of contextual knowledge discovery, desk research and literature studies. On the basis of the knowledge gathered and case studies of selected housing schemes, the schemes were grouped in terms of their leading characteristics and the author's criteria were then formulated [11]. The process led to the formulation of the author's typology, which reflects the current state of seniors' housing.

In the second stage, on the other hand, an anonymous quantitative study—a questionnaire survey—was carried out. The survey form was made available digitally and resulted in responses from 813 respondents. The aim of the survey was to obtain precise answers about the expectations of future seniors with regard to the senior living environment, taking into account the potential to promote health at home. The results of the survey are presented in graphs and discussed later in the paper (see section 4).

3. AN ATTEMPT TO CLASSIFY THE HOUSING ENVIRONMENT FOR SENIORS

This chapter is a review and is based on the research findings published in the academic monograph 'Housing for health. Designing for future seniors' by A. Gawlak. As illustrations for the forms of senior housing defined by the author, contemporary examples of the architecture of buildings erected in the last 15 years are indicated.

3.1. Strictly senior architecture

Buildings that are aesthetically pleasing, devoid of the stigma of health care centres or nursing homes and designed with the elderly in mind have been around for more than two decades. This senior architecture,

which prioritises functionality, accessibility and affordability, is determined by legislation and financial instruments and incorporates the use of modern technology, recognises the individual needs of an ageing person. An example of this is a house for an ageing couple located in Madrid. Ignacio G Galán and OF Architects designed an unusual building with a façade finished in blue ceramic panels and corrugated sheet panels, as well as a roof reminiscent of saw teeth. The avant-garde façade is complemented by details such as balustrades, shutters, blinds and green furniture. The interior of the house, meanwhile, is complemented by oak furniture and a light tiled floor. The building is designed to allow residents to age in place and to foster social relationships, so the architecture opens onto the street, at the front. A ramp leads to the entrance, and once you cross the threshold, you can access the living room, dining room and kitchen directly. The building incorporates technologies such as solar panels, heated flooring and automatic blinds to control heat gains and illuminate the interiors accordingly. On the lower floor, there is an independent living unit that the owners can rent out to maintain financial stability. This space can also be used for a potential future caretaker [13].



Fig. 1. Home for an aging couple in Madrid, designed by Ignacio G Galán and OF Architects
 Source: <https://www.dezeen.com/2024/01/12/ignacio-g-galan-of-architects-madrid-home/>

Another interesting initiative is the BoKlok modular home adaptation project for the elderly

and people with dementia, a collaboration between IKEA, Skanska and the Queen of Sweden. SilviaBo is intended as a response to the country's ageing population and the resulting demand for accessible housing. The housing complex was constructed from prefabricated wooden modules and assembled on site. Its functional layout has been adapted to the needs of people with dementia. This solution is intended to support independent living for residents for as long as possible. The project includes buildings with different numbers of storeys and includes one- and two-bedroom flats. Senior-friendly solutions have been planned, such as wide entrances, automatically opening doors, flat surfaces, which are also suitable for wheelchair users, and low thresholds. Additional lighting and a visual identity system were also provided. Technological solutions such as heat sensors in the cookers have been used. The interiors are characterised by muted, friendly colours, and the furniture is from the IKEA collection. Various accompanying amenities are envisaged, including gardens with flowers and vegetables, a building with pergolas and a barbecue. Environmentally friendly solutions such as green roofs and solar panels have been implemented on the estate [14, 15].



Fig. 2. SilviaBo – project of adapting BoKlok modular houses for the needs of the elderly and people with dementia

Source: <https://www.dezeen.com/2019/08/20/ikea-boklok-prefabricated-silviabo-elderly-housing/>

3.2. Assisted housing for the elderly

The concept of sheltered or assisted housing for the elderly provides an alternative to the offer of residential care homes, as well as part of the care services (community care) in the senior citizen's

place of residence. As an example, the Willow Barns project in the UK offers 75 independent living units for people aged 55 and over and includes 24-hour care support and an alarm service. The functional layout includes an individual living space, kitchen, bathroom and also a dressing room. The complex is equipped with a lift and includes communal spaces such as a laundry room, garden, gym, hair and beauty salon, restaurant and even a wellness centre or hobby room. The aspect of affordability for seniors is extremely important. The project, inspired by agricultural buildings from the early 19th century, won the HAPPI Housing Design Award in 2017 [16].



Fig. 3. Willow Barns, England

Source: <https://housingcare.org/housing-care/facility-info-161314-willow-barns-stokeontrent-england/>

3.3. Creative co-housing

Co-housing – could it be the way forward for better living conditions and improved quality of life? UK

research shows that co-housing is not as niche a form of living as the model's reputation suggests, and that shared living is not for a niche audience [17].

An interesting example of a form of co-housing that supports independent living for older people is the Hogeweyk housing complex in the Netherlands. The complex consists of 27 houses, each housing six to seven residents with dementia, with similar lifestyles. The area has amenities such as a supermarket, restaurant, café, hairdresser and theatre, which can also be used by residents of surrounding estates. Each home is supported by a team of carers and the development ensures accessibility and safety, promotes autonomy and neighbourly connections. It was awarded the Homes4Life pilot certificate as part of a project by an international consortium of 5 European countries [18].

Nowadays, new housing models are increasingly being searched for that would contribute to solving the key challenges of our time, such as, among others, loneliness as a new disease of civilization, changes in the demographic structure and the related growing need for care. Co-housing/co-living, as a system proposing to share facilities of various kinds, could significantly improve the living conditions of many in social terms at least. An equally important aspect in favour of the benefits of such a housing model is the economic factor.

3.4. Controlled social-mix

The creation of strictly senior citizens' housing, as well as mono-functional larger developments, small developments just for senior citizens, can



Fig. 4. Hogeweyk housing estate in the Netherlands

Source: <https://hogeweyk.dementiavillage.com/>

unfortunately also have negative effects on this community. There is a risk of alienation of residents, so-called secondary exclusion created, paradoxically, by creating almost luxurious enclaves. A much better solution may be to design layouts enabling the comfortable coexistence of various age groups (the so-called social mix) on the scale of an individual building, architectural complex, housing estate or neighbourhood, where the interaction of residents would additionally benefit all parties. Targeting the needs of only one user group automatically discriminates against the others and in practice also works to the disadvantage of the apparently privileged. The point is that functional and spatial solutions should always take into account the regulations at the legislative level in order to consistently create a pleasant living environment for different social groups, on a scale and in proportions determined by the architect. The symbiotic coexistence of generations, taken into account at the stage of the programme for the building or estate and further on in the architectural and construction design phase, supported by legal regulations, can provide a guarantee for the quality of the space.

25 years old. The seniors can support the newcomers in learning the language, and the younger residents can reciprocate with education on social media or new technologies [19, 20]. Another interesting development is Warburton House, Ninewells, an intergenerational, human-scale housing complex located in Cambridge, surrounded by nature, where 74 of the 240 flats are designed for people aged 55 and over. The development is characterised by accessible spaces and services. It includes communal spaces such as a hairdressing salon, cinema room, garden, laundry, guest room and communal lounge with kitchenette. In addition, it is equipped with a 24-hour emergency alarm [16].

3.5 Alternative care farm

In Europe and throughout the world, alternative forms of providing and implementing care services for older people are constantly being explored. Consideration is being given not only to the creation of new care models, but above all to the possibility of adapting existing solutions so that existing potential can be used to create large-scale systemic arrangements to meet the ever-growing demand. At the same time, the search also revolves around non-institutional solutions. One fairly new form, which has not been disseminated in Poland, is the so-called care farms. This is an innovative concept combining agricultural – multifunctional – and social functions [21]. Social farming is defined in a European Union document as “a cluster of activities that use agricultural resources – both animal and plant – to generate social services in rural or semirural areas, such as rehabilitation, therapy, sheltered jobs, lifelong learning and other activities contributing to social integration” [22]. This form of care is most developed in the Netherlands, but also in Italy, France or Norway. Farms qualifying their activities as so-called social agriculture are defined as e.g.: farming for health, care farming, green care, green therapies. Through the diversity of their activities, they provide therapy, rehabilitation, education and, above all, care services, both in the form of short (24 h) and long-term stays.

The Care farm De Hulst in Oterleek, the Netherlands, designed by the design office FARO Architecten, can serve as an example. The facility is designed for elderly residents with dementia. The complex consists of a historic bell-shaped building with two barns, and three attached barns. The overall



Fig. 5. Warburton House, England

Source: <https://housingcare.org/housing-care/facility-info-161749-warburton-house-cambridge-england>

One of the more interesting concepts is the Swedish Sällbo project, located in Helsingborg. This multicultural and multigenerational living space with communal spaces is focused on stimulating social interaction. Young people, refugees and the elderly have been brought together in order to offset loneliness. Half of the residents are therefore over the age of 70, and the remaining residents are 18-



*Fig. 6. Care farm De Hulst designed by FARO Architecten
 Source: <https://faro.nl/projecten/zorgboerderij-de-hulst/>*

design is stylistically coherent, and the development is distinguished by sustainable water management, sustainable energy management, and the use of environmentally friendly materials [23].

In Poland, too, an attempt has been made to implement a project involving the expansion of rural agritourism farms, in the form of family care homes. They have the advantage over traditional nursing homes that, through their individualised character, intimacy and family approach, they break all the stereotypes associated with so-called old people's homes, such as exclusion, seclusion and dehumanisation. And, above all, a stay in such a household is associated with less anonymity and has greater potential in terms of meeting sociological and psychosocial needs. It certainly also facilitates integration into a new environment. This is of great importance, especially for the elderly and lonely at the same time, who for various reasons cannot count on support from their families. The change in the family model, including the increasingly rare model of a multigenerational family living together, as well as living alone without starting a family, is encouraging an increase in the number of lonely older people (over 65), so all aspects of non-institutional care are gaining importance.

Another revolutionary project is a conceptual model for next-generation retirement homes, combining residential function and health care facilities in a single concept, in the form of vertical urban farms, in Singapore. Although the project in question was made for Malaysia, it originates from a European cultural background. The concept was created with the private sector and a specific location in mind, but the idea itself has great potential for adaptation. It is the architects' response to the ageing of the Asian population and the increased demand for food. The concept addresses two problems of Asian society: rapid ageing and access to their own food – around 90% of food products are imported. Based on Research-based Design, the architects proposed a solution that is a self-sustaining organism that guarantees employment, healthcare and prevents exclusion for the elderly. By designing market mechanisms related to work, such as production, the circulation of goods, etc., it is also a commercial premise. In addition, the project ensures that very important aspects of older people's lives are realised: a sense of security, including financial security, a sense of acceptance and group functioning, physical activity, a sense of belonging. This makes it a real vision and not just another utopian concept [24].



Fig. 7. Home Farm designed by SPARK Arch
Source: <https://sparkarchitects.com/work/home-farm>

3.6. Synergic habitat: creative partnership between generations

The idea behind this concept is to create compact ‘self-sufficient’ residential areas for the compatible integration of old and young people and harmonious social development. The result is socio-economic synergy, thanks to functional and spatial solutions that foster the cooperation of people of different ages, the utilisation of their potential and their creativity.

The concept of a synergic habitat formulated by W. Bonenberg in the project “Visions of tomorrow’s architecture” is based on the following assumptions [25]:

- the needs of the representatives of the older generation generate a demand for a wide spectrum of specialised services, referring to fashionable trends related to a healthy lifestyle, care for fitness and figure, improvement of well-being and physical condition (the desire to retain youth). These are services such as: wellness, recreation and health services, fitness, swimming pool complexes, wellness salons, massages, saunas, gyms, aromatherapy, specialised beauty and cosmetic treatments. There are also restaurants with healthy food, cafés, interest clubs, discos designed to maintain social contacts among the older generation;

- this kind of service for clients recruited from the older generation is at the same time a workplace for creative young professionals, who can find employment in the vicinity of their homes located in a “synergic habitat”. It is a very convenient solution for parents bringing up young children, young people looking for flexible forms of employment with the possibility of working part-time;
- it is also an opportunity for additional social activation of elderly people, who can devote their free time to the children of young professionals living in the habitat, organising common games, meetings, talks, neighbourhood celebrations.

It is at the same time “the opposite of anonymous architecture with impersonal crowds of constantly hurrying people, alienated, looking only at themselves. Urban formations that condemn us to arduous car journeys to services and to work. Estates, with forgotten elderly people whose future is planned in isolated old people’s homes. Housing estates with parents who are eternally busy, children who sit alone in front of their computers and young people for whom social contact is determined by Facebook and Twitter [25]” [authors’ translation].

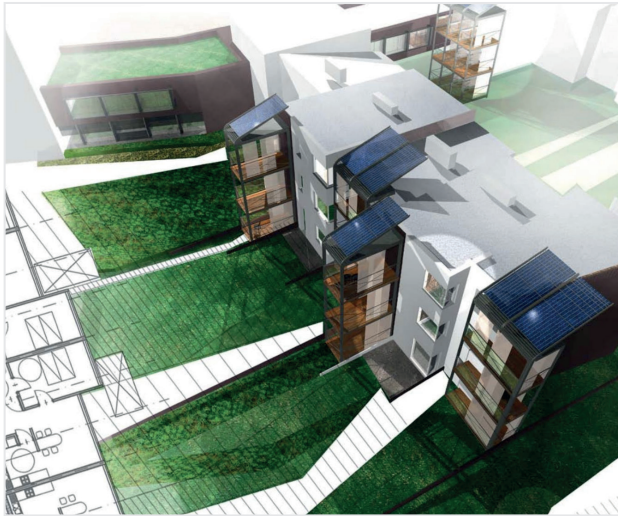


Fig. 8. Multi-generational housing complex, designed by W. Bonenberg
Source: Catalog of the project “Visions of tomorrow’s architecture” organized by Architektura & Biznes

One of the first applications of this idea in Poland is the project for a compact multifunctional urban complex in Pobjedziska, designed by W. Bonenberg, J. Grochulski,

R. Jurkowski and R. Loegler. The aim of the project was to revitalise a section of Pobjedziska by designing a space that would create a new urban quality that could become a recognisable brand of the city, in line with the described idea of a ‘partnership of generations’. The project in the residential part includes 115 flats with an average size of 61 m² (50-95 m²) with a total area of 7044 m². The characteristic feature of the proposed solution is, on the one hand, the direct and close contact of the flats with services and greenery, and on the other hand, the possibility of “covered access” from each flat to an area offering a wide range of services for seniors (in our climate this is important for most of the year) [25].

4. EXPECTED PARAMETERS OF HOUSING DEVELOPMENT FOR SENIORS

4.1. Survey research

The survey entitled “Survey on the quality of health support spaces” was carried out between 2018 and 2020, as an online survey among 813 respondents. The survey was divided into two main parts: Part 1 ‘Hospital space. A survey of perceptions of the residential space’ and part 2 ‘Space of ageing.

Table 1. The survey questionnaire. Prepared by Authors

Please assess which type of housing is most beneficial for the (1-5)					
Nursing home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Day care home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private caregiver at home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Co-housing for older people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Current place of residence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Please assess the truthfulness of the following statements (yes, no, don't know)					
I am considering the possibility of living in a nursing home			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am considering the possibility of changing the apartment to one suitable for older people			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am considering the possibility of changing my place of residence to cohousing for older people			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am considering the possibility of living with a family, e.g. with my children			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I do not consider changing my place of residence in old age			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Please assess facilities for older people in the place of residence (1-5)					
The apartment space adapted for disabled people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nursing supervision available 24/7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online medical consultations available 24/7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online psychological consultations available 24/7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internet access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proximity to services such as: pharmacy, shop, bank, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to recreation and sports space for seniors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Expectations of the space of ageing'. For the purposes of this thesis and the research topic undertaken, part 2 of the survey will be discussed in detail. The survey (part 2) contained a set of 3 closed multiple choice questions. Respondents completed a rating on a scale of 1-5.

The evaluation form indicated to respondents 5 types of living arrangements for an older person: *nursing home, day care home, private caregiver at home, co-housing for older people* and *current place of residence* with a request to indicate a preference for each.

The results are shown in Figure 9. The most desirable solution was considered to be the possibility to stay in the current residence, which fulfils the common idea

of 'aging in place'. The least desirable option was an institutional solution, i.e. a nursing home.

In the next step, respondents were asked to refer to the veracity of the indicated sentences (see Figure 10):

- *I am considering the possibility of living in a nursing home;*
- *I am considering the possibility of changing the apartment to one suitable for older people;*
- *I am considering the possibility of changing my place of residence to cohousing for older people;*
- *I am considering the possibility of living with a family, e.g. with my children;*
- *I do not consider changing my place of residence in old age.*

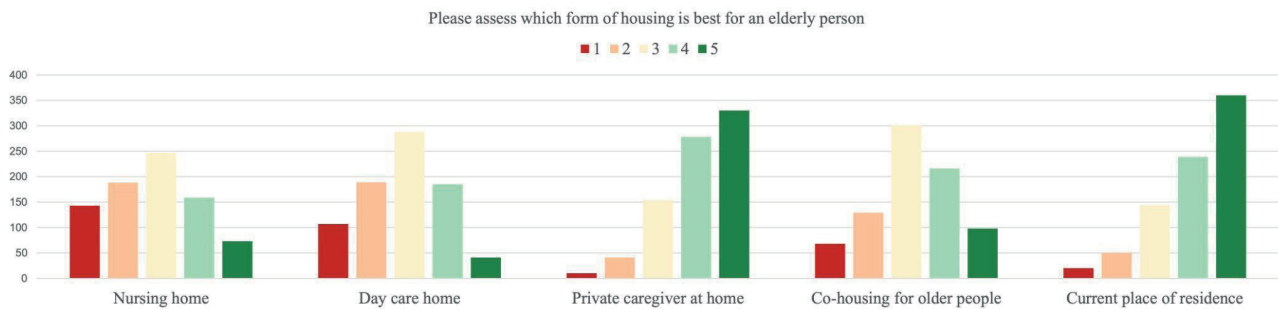


Fig. 9. Preferred forms of residence according to older people. Prepared by Authors

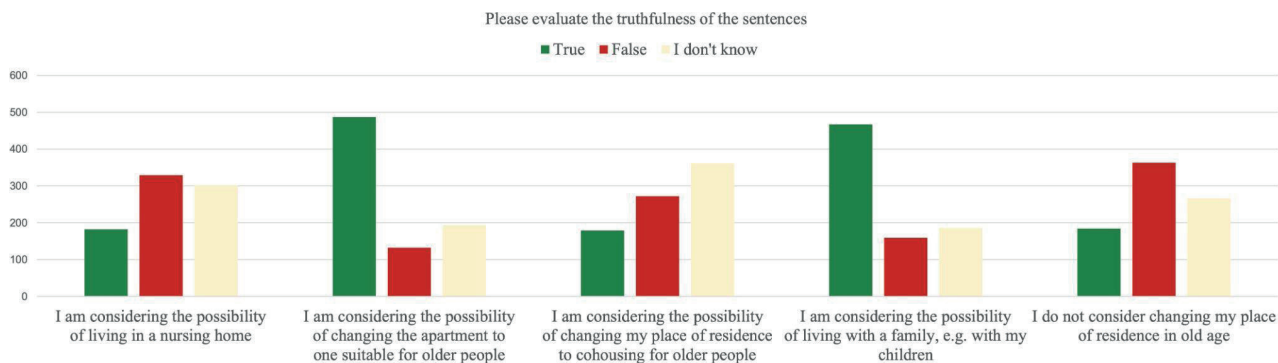


Fig. 10. Assessment of the truthfulness of opinions regarding housing issues. Prepared by Authors

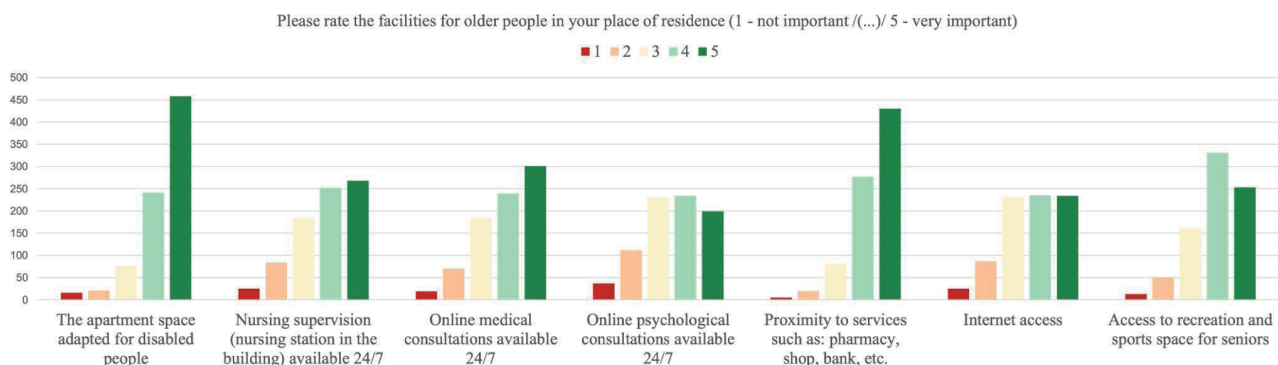


Fig. 11. Weights of facilities for older people in the place of residence. Prepared by Authors

The aim of this question was to address the various forms of senior housing support through the prism of one's own expectations and experiences.

In the last question, the residents were asked to give weights (1-5) to the possible amenities envisaged in their place of residence for seniors (see Figure 11):

- *the apartment space adapted for disabled people;*
- *nursing supervision (nursing station in the building) available 24/7;*
- *online medical consultations available 24/7;*
- *online psychological consultations available 24/7;*
- *proximity to services such as: pharmacy, shop, bank, etc.;*
- *internet access;*
- *access to recreation and sports space for seniors.*

4.2. Conclusions

It is important to note that those taking part in the survey were between the ages of 18-27. Respondents significantly indicated that their preference would be to remain in their own and current place of residence in their senior years, while allowing for the function of a carer or other person to support their independence and safety. The least desirable form of care was found to be a nursing home or day care home. This confirms previous surveys and the declarative aversion to institutional forms of senior living.

In the next question, respondents indicating the veracity of the statements made basically confirmed their answers from the first question. Here, they additionally indicated the possibility of not only living in their current place, but also with their family. At the same time, respondents are aware that their current place of residence may be insufficiently adapted (i.e. not equipped with a range of amenities for seniors), which may become a reason to change it in the future.

In the final part of the survey, respondents prioritised the amenities of their place of residence. They considered the absence of architectural barriers at the place of residence to be the most important, followed by the proximity of important functions in the vicinity of the place of residence, such as a shop, pharmacy etc. The ability to access nursing or medical support in the form of online consultations was also important.

The above results allow for ongoing monitoring of public preferences in relation to the living environment for the elderly, and the priorities given support decision-making in the process of designing architectural and urban planning solutions that promote the well-being of residents in ageing cities.

5. SUMMARY

The combination of factors influencing the health of older people in their place of residence is the basis for a typology of the residential environment that takes into account two main elements. The first is the environment in which most older people currently reside. The second element is the historically shaped attitudes to old age operating in contemporary society. For example, in large Polish cities (Warsaw, Krakow, Poznan, Gdansk, etc.) these are dwellings in houses built 70-30 years ago in big slab housing estates. For young people at that time (migrants from the countryside or small towns), the "allocation" of such a flat (usually a cooperative flat) was a kind of social ennoblement and a dream come true to live and work in a big city. We can also mention the large group of young tenants at the time, who immediately after the Second World War settled in the inner cities of large cities, flats located in old tenement houses.

Depending on their legal status, these new tenants were quartered in large private flats subdivided into smaller units, or were given "allotments" in flats whose former pre-war owners were dead or had emigrated abroad. Most of these apartments (both in large prefabricated housing estates and in old downtown tenement houses) were devoid of basic amenities for older people (driveways, handrails, elevators, etc.). This group of young tenants at the time is today the senior "core" of the local community in many areas of Polish cities. This situation results in a characteristic age differentiation of these regions, with a noticeable "aging" tendency of the population living in inner-city areas and former "modernist" large-panel housing estates.

Interestingly, according to Bojanowska's study [26], the vast majority of seniors want to continue living in their previously occupied flats with various options for support:

- occasional help from relatives and neighbours,
- sharing the flat with children, grandchildren or extended family,
- having privately paid or free institutional assistance from the PCK (eng. Polish Red Cross), Caritas, etc.

The OECD report 'Ageing in Cities' [27] indicates that this way of living is the predominant type of housing environment for older people in European cities. At the opposite typological pole can be located the residential environment associated with spatially segregated homes for the elderly (the so-called nursing homes). This is a traditional form of so-called institutional care. These homes are intended for older

people who cannot receive the necessary care and support in their homes.

How to spend the autumn of life is an increasingly explored area of research and interest. Above all, it is observed that the activity of today's senior citizens is increasing and is more visible in society. A number of initiatives undertaken by older people are strictly organised for this age group. On the one hand, these activities enhance quality of life, but on the other they do not result in assimilation into other social groups. Examples include proposals such as the university of the third age and senior citizens' clubs.

Some similar initiatives are run by municipal or non-governmental organisations, often local. While the range of activities aimed at older people is visibly expanding to involve new audiences, there is still a large group of socially inactive people. Exclusion or social isolation may be caused by disability, lack of motivation or poor mental health. Social isolation and loneliness are still noticeable on a large scale, especially in cities. Multigenerational families living together are an increasingly rare model, which further accentuates generational loneliness. A consequence of these changes is the need for older people to live more independently and autonomously and to seek social interaction outside the home. All this means that not only the needs of future generations are evolving, but also their social perception. It can therefore be considered that the desired forms of residence should be an aggregation of future social needs on a physical, psychological and psychological level. Research clearly shows that currently the most popular, and usually the only possible form of housing involving comprehensive care, i.e. nursing homes or retirement homes, is mentally unacceptable to older people or those just contemplating impending old age.

Various proposals for the configuration of spatial forms of housing for the elderly can be observed: from closed, concentrated large-scale systems such as gated communities, to individual units exemplified by senior citizens' homes; to separate housing units dispersed in existing structures, supported by health care services. As a matter of principle, they should be dispersed in existing structures without causing exclusion, but on the contrary, in a symbiotic way, engaging in social and cultural life. The housing of the future will increasingly also be a place for both work and care. Thus, properly designed living spaces, easily adaptable to the changing needs of residents, will bring many benefits and savings over the years.

Housing development for seniors, in addition to architectural accessibility, should provide them with economic accessibility. This should be interpreted in such a way that the assumed costs of maintaining a house or flat do not exceed the capabilities of older people, most of whom are already less economically active. However, economic accessibility should not result from a reduction in the architectural quality and comfort of the building. Instead, it should be a feature to be taken into account by planners at the programming and design stage of an investment and should result, for example, from low-cost technologies or financial instruments providing, for example, co-financing of running costs as benefits guaranteed by the state or local authorities, etc.

A therapeutic role is guaranteed by social communal spaces in the living environment, designed for different social activities of the seniors. The solutions allow for the establishment and maintenance of social relationships, important for the proper functioning of older people who are often lonely. Such spaces are, as a rule, easier to plan in multi-family developments, both inside and around the buildings, incorporating them into the landscaping design. Optimal examples are co-housing solutions for senior citizens, where communal spaces also include the more private functional areas of the flats, such as kitchens, dining rooms or living rooms.

Another aspect taken into account was the support of housing units for seniors in terms of direct access to medical services at the place of residence (supported housing). Such solutions are also more common in multi-family buildings, due to both costs and space management. This is an important convenience because it allows older people to remain independent in their place of residence for longer, and often delays the moment when families take over the care of seniors or places the elderly person in an institutionalized form of care (nursing home, etc.).

The last aspect, resulting quite indirectly from functional and spatial solutions, and more from specific social policy, is programming the social structure of residents in buildings for seniors. Generational differentiation of users, but also those resulting from other differences, such as financial situation, social position or various support needs (e.g. students, young mothers, disabled people), through integration, increases the social potential of housing development, creating the possibility of symbiotic coexistence, in this meeting the various

needs of seniors. The coexistence of generations additionally means that it is assumed that young people who remain professionally active will be able to take up work in the service sector located near their place of residence, which will ultimately be used by older people living in the same housing estate and no longer professionally active.

Institutional forms of living are the least desirable solutions among both current and future seniors.

Therefore, the potential offered by housing development should be used to solve the housing problem for older people, but also access to medical care, for which the demand is gradually increasing. Methods of valorization of housing space, with particular emphasis on its health-promoting role, are particularly important for the environments most commonly inhabited by seniors.

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