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ORGANIZATION OF RESEARCH FOR THE POLSENIOR ARCHITECTS AND SOCIOLOGISTS SUB-PROJECT

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Abstract

In 2007 we started works under the grant commissioned by the Polish Ministry of Science and Higher Education concerning the aspects of ageing in Poland. One of the sub-projects within the framework of the grant prepared by staff of the Silesian University of Technology and Silesian University is focused on the investigation of the living conditions of seniors in selected housing environments. This is the first interdisciplinary research undertaken in this field in Poland and, accordingly, a very challenging methodological and organizational task. The scope of the paper is the presentation of its course and organization.

Streszczenie

W 2007 r. rozpoczęła się realizacja grantu zamawianego Ministerstwa Nauki i Szkolnictwa Wyższego mającego na celu zbadanie aspektów starzenia się ludzi w Polsce. Jeden z podprojektów przygotowywany przez pracowników Politechniki Śląskiej i Uniwersytetu Śląskiego poświęcony jest badaniom warunków zamieszkania ludzi starych w wybranych środowiskach zamieszkania. Jest to pierwsze w Polsce tego typu badanie o charakterze interdyscyplinarnym i w związku z tym stanowiące poważne wyzwanie metodologiczne i samej organizacji badań. Artykuł omawia przebieg i organizację tych badań.

Keywords: **Multifamily housing settlements; Older people; Quality assessment criteria; Expert analysis; Participation assessment.**

1. INTRODUCTION

Demographic data concerning the post-industrial world indicate significant and dynamic changes in the percentage of seniors in relation to entire populations. In Western Europe it is about 20% with an increasing tendency towards 30% in some developed countries. This tendency has been recognized and is subject of numerous scientific research works. In particular, environmental psychology and sociology deal with the problem of the accessibility of the built environment to seniors who are often marked with some kind of disability [1].

In Poland research into this social group was initiated in the second half of the 20 [th] century. However, it was predominately focused on economic and health problems rather than on the living conditions. Examples of major research projects are: "The Polish Old Age" (2002) devoted to a wide range of problems involved

Figure 1.
Poniszowice

Figure 2.
Katowice, the Super Unit

Figure 3.
Gliwice, Sobiszowice

in ageing, or "WOBASZ senior" (2003-2005) concerning health problems of Polish seniors. In view of insufficient insight into the complexity of the phenomenon of ageing in Poland the Polish Ministry of Science and Higher Education announced the competition for a grant entailing research into medical,

social and economic problems of Polish seniors (PolSenior) entitled: "Medical, psychological and sociological aspects of ageing in Poland" initiated in 2007 and scheduled for completion in 2010 [2]. The project manager is Professor Piotr Błędowski from the Warsaw School of Economics. The research works under the project, coordinated by the International Centre for Molecular Biology in Warsaw engage medical universities, faculties of sociology, physical education, psychology, from major academic centres and the Social Studies Laboratory in Gdansk. The problems are divided into 6 main blocks, one of which is devoted to the living conditions of Polish seniors.

The thematic block entitled: "The social capital of Polish seniors in different urban environments and their adjustment to meet the quality and life activation requirements was undertaken by an interdisciplinary group of architects and sociologists representing the Silesian University of Technology (SUT) in Gliwice and Silesian University (SU) in Katowice [3] (*A. Bartoszek*, *E. Niezabitowska*, *B. Kucharczyk-Brus*, *M. Niezabitowski*), under the supervision of Professor Adam Bartoszek from SU.

The research into the living conditions of Polish seniors is a supplement by the national inquest and is conducted at three accuracy levels: 1) the national sample, 2) three selected housing estates and old peoples' homes by means of the experts' assessment system and surveys, 3) in-depth interviews with selected respondents of the investigated estates and the old peoples' homes.

In the national sample (5500 respondents, the research is still in progress), beside medical, social and economic data, more general information is to be derived, including the forms of occupancy, the ownership status, the physical abilities and barriers that Polish seniors must overcome in their living environment.

The second level of the research involves in situ case studies of three typically Polish housing settlements conducted in 2007-2009. A model for the experts' assessment was devised as well as a model of the participative assessment (architectural, urban and sociological one). This part of the project focused on the living conditions of Polish seniors will be supplemented by similar case studies at the experts' assessment level and the participative assessment on the example of two old peoples' homes – one state owned and one private.

The third level of the research involves interviews with the seniors who have been inhabiting the investigated settlements for a long time, in view of their abilities and self-sufficiency in day-to-day functioning (self-sufficient people, people with deficiencies) and with those who had made a conscious decision to move in there at old age (inhabiting the housing settlements for the last few years). A subjective assessment of the quality of life in the old peoples' home is to be made by means of direct interviews.

The following three different types of multi-family housing environments typical of Poland were selected for the research:

1. Post collective farm housing estate in Poniszowice village, constructed in the 1970s. The estate comprises three pre-fab slab housing blocks situated on the outskirts of a rural zone. Altogether, it accommodates 50 flats, the floor area of which is between 30-50 m^2. The flats are equipped with the water supply and sanitary systems, electric energy supply system and central heating. The buildings have three floors.
2. The „Super Unit" housing settlement situated in the centre of Katowice (a Voivodeship city). The building is as a pre-fab slab tower block erected in 1968 and containing 760 34-57 m^2 of flats, equipped with the water supply and sanitary, high ground floor with the headway and one floor above the ground level that serves technical functions.
3. Sobiszowice housing settlement, patronage housing of historical value, situated on the outskirts of Gliwice, a district and academic city centre, constructed in the 1920s for the workers of the National Railways. It encompasses three urban quarters containing 300 flats. The buildings have the running water and sanitary system, as well as electric energy supply system. However, in all cases the flats do not have bathrooms only small toilets with cold water supply. There are typical coal storage holes in the courtyard.

The choice of the old peoples' homes has not been finally settled, as it is influenced by the involvement and openness of the management, as well as by access to the technical documentation concerning the buildings in question.

At the second level of the accuracy of the research under the project sociologists were interested in the differentiation of the social capital of the seniors inhabiting the examined housing settlements and their daily activity, as well as the barriers that they have to overcome both in the external urban environment and in the interior of the building and the flat while performing their day-to-day doings. Another

interesting issue was the attitude of the respondents towards their living conditions and their subjective assessment of these conditions in the material context (the building, the flat) and the social one (the family, the neighbours, the social contacts).

Whereas, architects were interested, first and foremost, in the quality of the living conditions offered by the housing environments and the confrontation between the experts' evaluation and the subjective attitude of the respondents to this quality. Therefore, the architects planned the studies to run in several stages and in two separate parts: the experts' part and the environmental one involving the participation of the users in the assessment.

Table 1.
Schedule of the performance of particular stages of the research

Stage	Stage phases	Time frames
I	Literature studies	10.2007 onwards
	Determination of the criteria for the experts' estimation	10-12.2007
	Experts' assessment – Poniszowice	11.07-01.08.
	Experts' assessment – Super-Unit	11.07-01.08.
	Experts' assessment – Sobiszowice	10.08-01.09
	Conclusions from Stage I – report on the completed studies	
II	Determination of the criteria for the sociological questionnaire	10.07-12.07
	Determination of the criteria for the architectural questionnaire	10.07-12.07
	Formulation of the questions for the sociological and architectural questionnaire	1.08-02.08
	Preparation of the sample, collection of the data on the number of the flats occupied by seniors	10-12.2007
	Construction of the surveying team consisting of students of architecture at the Faculty of Architecture (TUS) and students of sociology at the Department of Social Sciences and Sociology, Faculty of Organization and Management (TUS)	01.08-03.08
	Competition for a logo and the preamble to the questionnaire	01.08
	Pilot questionnaire	02.08
	Carrying out the questionnaire	03.08-03.09
	Insertion of the data to the SPSS	05.08-05.09
	Preparation of the results	06.09
	Formulation of the questions for the focus meeting	01.2009
	Conclusions from Stage III	in progress
III	Focus meeting	29.01.2009
	Records of the answers given at the focus meeting	02.2009
	Conclusions from Stage III to be used in individual interviews	02.2009
IV	Preparation of interview the objectives as far as the architectural and sociological aspects are concerned	02.2009
	Selection of the sample: the disabled, the people living in the building for over 30 years, the people who moved in there in the last 10 years	03.2009
	Training of the surveyors- students of architecture and sociology	03.2009
	Pilot interviews	April or March
	Additional training of the surveyors	27.04.09
	Questionnaires conducted in the Super-Unit	04.09-06.09
	Records of the questionnaires	04.09-07.09
	Questionnaires conducted in Poniszowice and Szobiszowice and records of the questionnaires	planned for 06.09-10.09
	Preparation of the results from stage IV	Planned up to 12.09
V	Determination of the criteria and selection of the old peoples' homes subjected to the studies	06.09-09.09
	Experts' studies in the selected old peoples' homes	10.09-02.2010
	Questionnaires conducted in the old peoples' homes	10.09-02.2010
	Preparation of the results	up to 05.2010
VI	Final conclusions from the project – project completion	up to 09.2010

Stage I – literature analyses of the approaches towards these issues in Poland and worldwide. This stage was essential for determining the criteria of the assessment of the investigated housing environments and was completed by the experts' assessment (Table 2).

Stage II – studies at the second level of accuracy – focused on surveying the level of satisfaction with the occupancy at a given place, a building and a flat, the feeling of safety and the barriers that the elderly, ill, or disabled people must encounter in their place of living. Also, questions concerning the services offered at the given location were asked.

Stage III – studies at the third level of accuracy- a focus meeting at the Seniors' Club at the Katowice Super-Unit, to confront the results of the questionnaires with the opinions of the members of the Seniors' Club.

Stage IV – studies at the third level of accuracy- individual interviews with selected inhabitants in accordance with the following rule: the disabled, the people inhabiting the building from the very beginning, the people who moved in there in the last 10 years.

Stage V – the experts' studies and the interviews conducted in selected old peoples' homes.

Stage VI – final recapitulation of the results and conclusions.

Table 2.
Compilation of the basic criteria considered in the experts' assessment

Compliance with the Building Law regulations
Compliance of the spatial management of the surroundings of the studied housing estates with the Polish Building Law requirements
Compliance of the studied buildings with the Polish Building Law requirements
The European standard of rooms size and functional completeness of the flat
Compliance of the size of rooms with European standards
Compliance with the ergonomic requirements
Compliance with the Universal Design concept requirements
Availability of bathrooms in standard A according to ADAAG
Availability of bathrooms in standard B according to ADAAG
Availability of kitchens in standard A according to ADAAG
Availability of kitchens in standard B according to ADAAG
Compliance with the Built for All requirements
Compliance with the Design out Crime requirements
Presence of criminogenic zones in the surroundings
Behavioural quality
Privacy, territoriality, spatial gradient
Other important factors
Possibility of removing the cases of incompliance and irregularities
Maintenance condition

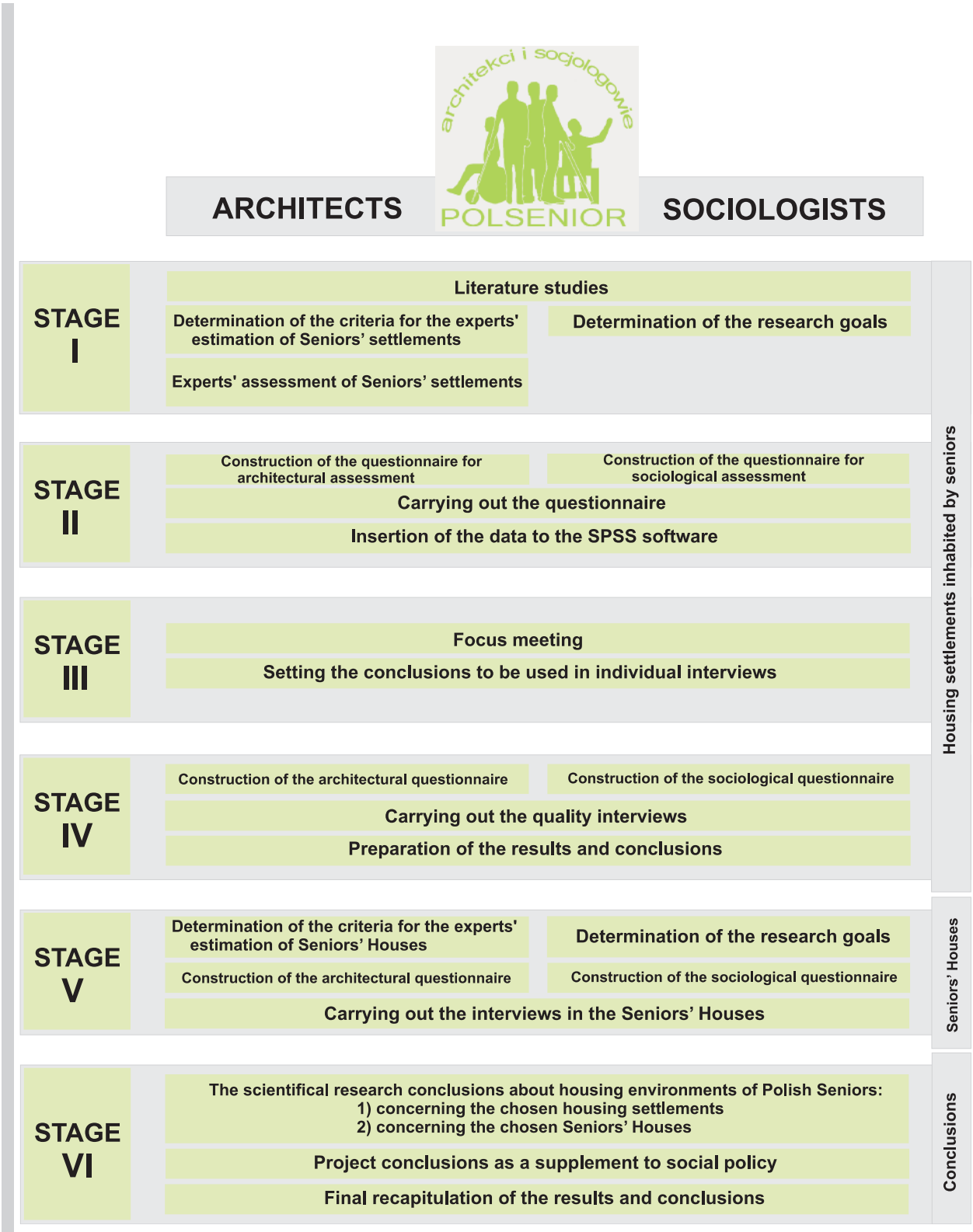

Figure 4.
Diagram illustration of the stages of the research

STAGE I

Stage one was entirely focused on the experts' assessment of the selected housing estate. The first phase involved literature studies and analyses of the regulations in force to determine the criteria for the assessment. On the basis of the literature studies a profile of a senior in the built environment was drawn. In most of the publications and studies devoted to the old age three stages of ageing corresponding to specific age ranges are assumed in view of significant differences in physical ability: 55-65, 65-80 and above 80 years old. Seniors belonging to the first group are retired and are generally in good physical shape, spending relatively a lot of time outside the flat [4]. However, with advancing old age their health condition and fitness get worse and these processes occur faster for people over 80, accompanied by dementia (30% of the population above 90 years old) and resulting in spending almost all the time inside their flats. In view of diminished fitness the oldest of the respondents are exposed to the risk of different accidents at home that may take place because of maladjustments in the flats in relation to their physical limitations. Staying at the flats for most of the time is not only an outcome of insufficient physical ability but also caused by barriers existing in the built environment, which, in the PolSenior project section consisting of architects and sociologists (also identified by other authors: S. Iwarsson, B. Slaug) were divided into 5 main accessibility zones:

1. Urban zone with the radius of up to 500 m from home, which should contain all services essential for the functioning of seniors: shops with basic foodstuffs, basic medical care, daily recreation sites and other basic services such as: hairdresser, bars, cafeterias, public transport stops that enable contact with further surroundings and access to higher level services (cemetery, church).
2. Zone of the nearest surroundings of the building, enabling easy driveway to the building, parking spaces, benches and greenery.
3. Entrance zone (stairs, heavy entrance door, lighting, letter boxes, etc.).
4. Communication structure of the building and commonly used facilities (staircase, lifts, cellars, drying rooms, etc.).
5. The flat with its furnishing (possibility of moving around in a wheelchair or walker, safety in the kitchen and bathroom, etc.).

In view of frequent dysfunctions and disabilities of seniors basic accessibility requirements were determined on the grounds of the following sources: The Polish Building Law dated 2002 and 2004 [5] stipulating the accessibility criteria for the disabled in the built environment, Housing Enabler [6] designating the types of disabilities and the requirements set forth for the built environment, the Universal Design concept developed at North Carolina University [7], ADA – the USA legislation concerning the accessibility of the built environment [8] , the European Union guidelines contained in Built for All [9], and Home of Older People – English manual for seniors faced with the decision of changing their place of living [10], as well as Polish publications devoted to the environment suited for the disabled ("Integration") [11].

Due to the dysfunctions and disabilities associated with old age, and, consequently, decreased feeling of safety and sense of security, potentially dangerous zones in the built environment were also identified in accordance with the recommendations of the concepts of Design out Crime [12] and Crime Prevention Through Environmental Design [13].

The studied housing environments were assessed in view of the above mentioned criteria, compared and analysed in terms of the possibilities of liquidating the existing barriers. Some of them, for example: poor maintenance level, can be easily removed (uneven pavement surface, slippery floors, hard opening doors, etc.). Other barriers are embedded in the communication structure of the building, for example: absence of lifts, entrance stairs without a ramp, absence of handrails or banisters along the communication route, inaccessible letter boxes or waste bins difficult to open up, they may pose serious financial challenges. Likewise, the proportions of rooms (the width or depth of rooms) in flats often hinder the adjustment to the needs of a person in a wheelchair or walker.

STAGE II – FORMULATION OF THE QUESTIONS AND SURVEYING

The questions for the architectural interviews-questionnaires were derived from a part of the experts' studies. The architects were focused on finding out how the living environment and the building itself were perceived, whether the inhabitants regard themselves as physically fit, and, if, not, what barriers they encounter in their surroundings, in the building, in the flat, and, first and foremost, in their kitchen and bathroom, balcony, likewise; how they assess the view from the balcony and if it is important for them,

Figure 5.
The logo contest results

if they feel safe around the housing estate and in their flat.

The questionnaire drawn by the sociologists involved in the studies was aimed at investigating the human capital of the inhabitants and recognizing the daily activities of the retired. Another objective was to find out the extent of the impact of the surroundings on active life after retirement and the obstacles that hinder such activity. This part of the questionnaire made it possible for the architects to realize that certain personal features and the bonds that had been made in the place of occupancy and outside it really exerted an impact on the feeling of satisfaction from life and could even compensate the technical and functional maladjustments; whereas, the lack of personal contacts and day-to-day duties could contribute to the feeling of emptiness and dissatisfaction.

The team that prepared the questionnaire were faced with a fundamental technical problem, i.e. the necessity of reducing the number of questions due to the physical capabilities of the respondents, especially considering their advanced age and health condition. Accordingly, the number of questions was limited to 51 in the sociological part and to 41 in the architectural one. Such number of the questions guaranteed that the interview would not last longer than 2 hours.

The basic organizational task of this phase of the research was setting up the surveying team consisting of students of architecture and sociology. At first, 3rd year students of architecture were approached, as within the framework of the course in Design Strategies they had already prepared initial documentation required for the analyses of the living conditions in different types of housing. For the first phase of the initial in-situ tests 12 students of architecture and 15 students of sociology applied (3 from SU and 12 from SUT). In the course of the implementation of the project changes were made in the surveying team, especially among the students of architecture. The surveyors worked in teams: architect-sociologist, each endowed with appropriate authorisation and always leaving the: "thank you cards" and contact details for the respondents who had agreed to participate in the studies.

In order to integrate the surveying team, two contests were organized with the students acting as jurors: the first one for the graphic logo of the PolSenor project addressed to students of architecture, and the second one, for drawing up the preamble to the questionnaire addressed to students of sociology. Out of the 5 participants of the logo contest Michał Burmistrz's design was the best.

The text of the Preamble was discussed at the next training meeting, during which the contents of the poster were also settled, together with the objectives and time of the survey to be announced at the Super-Unit.

After the initial training, pairs of students (architect and sociologist) carried out pilot questionnaires with seniors in the students' own living environment. As the outcome of the discussions on the contents of the questionnaires, small corrections were made and, after additional training, the respondents living in the studied housing environments were tested, upon previous information campaign (posters in the buildings and announcements in a local newspaper). The answers to the questions were recorded by the surveyor – a sociologist in the sociological part and an architect in the architectural one. In addition, the architects made notes on the condition of the flat and its furnishing, also marking the changes that had been made in the course of its use. Upon the respondent's approval, photographs of the flats were taken.

Altogether, 165 questionnaires were collected, including 112 in the Super-Unit, 18 in Poniszowice, and 35 in Gliwice. The selection of the respondents in

the Super-Unit was made on the grounds of statistical statements, basing on the list of the inhabitants in the order of the place of residence, number of people registered in the flat and the age of 50 and over, obtained from the Katowice Municipality. The drawing of the 160 senior respondents was conducted by means of the SPSS software and, in the next step, the surveyors verified the actuality of the data and asked for approval for participating in the studies. The efficiency of the sample was 70%. In case of Gliwice the Chief Official for Civic Affairs for the city of Gliwice did not give the approval to make the registration data available to the surveyors. Thus, the selection of the surveying sample was made on the grounds of so called: "snow ball principle". Likewise, the surveyors working at Poniszowice just recruited the people over 50 years of age to participate in the study on the quality of their life, on the social capital that they represented and on the living conditions diagnosed by the architectural questionnaire.

STAGE III – FOCUS MEETING

The focus meeting was organized at one of the weekly meetings held in the Senior club at the Super-Unit in the presence of researchers (E. Niezabitowska, A. Bartoszek, M. Niezabitowski, B. Urbanowicz). After the presentation of the initial results from the

Table 2.
Compilation of the basic data on the studied housing environments

Information characterizing the housing settlement	Poniszowice	Super Unit/ Katowice	Sobiszowice/ Gliwice
Basic data for the experts' assessment			
Number of buildings	3	1	3 quarters
Number of storeys	3 plus the cellar	15 with flats and two (ground floor and first floor) for services and technical support, underground parking lots	3 + the attic and the cellar
Structural materials	Slab prefab concrete	Slab prefab concrete	Traditional brick
Total number of flats	50	762	300
Floor area of the flats	30-50 m^2	34-57 m^2	36-42 m^2
Number of rooms	1 - 4	2 - 3	2
Compliance with the European standards	Non-compliance- undersized bedrooms, kitchens and bathrooms	Non-compliance-undersized bedrooms, kitchens and bathrooms	Non-compliance – absence of bathrooms
Installations and the media	Electricity, running water, central heating	Electricity, running cold and hot water, central heating	Electricity, water, heating stoves or other
The nearest surroundings	Rural recreation lot	City centre, absence of semi-private and semi-public space	Peripheral zone of a municipality and an academic town, very neglected courtyards, absence of recreation greenery
Technical condition	Poor	Good/ average	Very poor
Basic data for the participative assessment			
Number of flats inhabited by seniors	No data available*	426	No data available*
Percentage of flats inhabited by seniors	No data available*	56%	No data available*
Number of questionnaires	19	112	37
Number of the disabled among the respondents	21%	28%	22%
Number of the respondents who live alone	42%	44%	59,5%

*No data available due to the refusal of the relevant registration offices

questionnaires, members of the Club were asked to express their views on the studies outcome and their attitude towards the building and the living conditions. Importantly, their outlook on living in the building had been differentiating because of changes in the composition of their family and specific standard of living. Generally, seniors expressed feelings of satisfaction with the location of the building in the centre of the city.

STAGE IV – PREPARATION OF THE RESULTS AND THE INTERVIEWS

The following respondents were chosen for the interviews: the disabled, people occupying the building for a very long time and people who had moved in the last 10 years. They were indicated by the administration of the building, as well as and by the surveyors from Stage II.

The objective of the in-depth interviews was to obtain more detailed information and to clarify some issues signaled at Stage II, including, for example: explanations why the flat had not been adjusted to the disability of its inhabitant, how it had been altered to accommodate the changing needs of the family, how the disabled dealt with the absence of lifts, why they had a strong feeling of safety/sense of security despite the presence of potentially hazardous and dangerous zones.

Another objective was to find out how seniors who have walking problems face the problem of the lift stopping only at every third floor, how the people occupying the flats for a long time were perceiving them in the passage of time, how they had tried to make alterations to adjust their flats to changing family needs and to their advancing disability, how they perceive it at present. The people who had moved in not sooner than 10 years ago were asked why they had chosen this building for old age habitation.

STAGE V will be focused on interviews with the inmate of old peoples' homes: a state owned home and a private one.

STAGE VI will be devoted to the recapitulation of the results and conclusions.

REFLEXIONS OF THE CONDUCTED STUDIES

The interdisciplinary research works run by the architects and sociologists within the framework of the PolSenior project are unique for Polish environmental studies. So far the cooperation of researchers has only been focused on large scale urban development issues and sociological studies used in undertaking planning decisions. Under the PolSenior project, apart from surveys, qualitative studies based on individual interviews have been made. The results will not be used for design purposes but for further research. More comprehensive comparative studies, as the authors expect, will make it possible to draw conclusions and recommendations for the social policy on housing for Polish seniors.

The most difficult aspect of the research was the cooperation of architects and sociologists and insight into different attitudes that they have towards the studied environment. In Poland environmental sociology is, to say the least, still underestimated, or ignored by some circles. One of the basic obstacles to mutual understanding is the fact that sociologists regard people as the main object of their studies, whereas for architects buildings are the chief research objective. This may lead not only to some misunderstanding but also pose some methodological problems. Traditionally, sociologists employ statistical techniques, where the most pertinent methodological problem is the selection of the sample enabling the correlation between the features of the studied respondents and the information obtained during surveying. However, the social environment constituted by the building and its inhabitants is too small for the selection of the sample in accordance with the methodological rules [14]. Furthermore, sociology is, to a large extent, a branch of science oriented on the "status quo", and not on making conscious changes in the reality, although this is not necessarily true of some new aspects of sociology, for example: advertising, etc.

Architects-researchers are interested in the building, or several buildings serving the same functions, whose features may be compared and assessed in terms of their better or worse quality. Such approach is purely practical, as it renders information on how to design to secure a high quality of buildings. At the same time, the information on quality may be derived by means of experts and participative methods. The experts system has been used since time immemorial. At first, the assessment was made by authorities, next,

as civilization developed, determined by standards set forth by building regulations and other normative activities (tradition, common practices, concepts and ideas). Participative assessments have been employed in developed countries since 1950s and are mainly focused on obtaining the users' opinions on the functions and performance of the buildings. They have a commercial character. It happens more and more often that poorly designed buildings do not attract buyers and users and, accordingly, must be demolished, which, from the point of view of construction lobbying groups as well as from the social perspective, is a waste of resources and labour, not to mention the destruction of the environment (generation of energy, materials, waste disposal, etc.).

The building is occupied and used by a specific number of people. It is only them who can make statements concerning its quality and adequacy to individual needs. Accordingly, surveys are not fully relevant, as the respondents assess their building, but each building is different, it has different advantages and disadvantages. Hence, in-depth questionnaires/interviews are an opportunity of confronting the respondent's dissatisfaction wihh certain architectural or urban planning solutions with the experts' assessment to find out if the dissatisfaction is justified, or, if it is only an outcome of the user's specific needs (health condition, disability, or some personal features).

The studies also reveal that the ways of improving the housing environment of the Super-Unit proposed by the architects involved in the studies (open plan flats enabling unhindered moving in a wheelchair) are not appreciated by the respondents, or even questioned and considered inappropriate for seniors (due to their increased need of privacy). The confrontation of the experts' assessment with individual attitudes indicates the extent to which the two may differ at the user's disadvantage, which is an issue widely discussed in Steward Brand's controversial book [15].

An important benefit drawn from the grant is the joint preparation of complex procedures by the research teams and the recognition of the fact that interdisciplinary approaches should be adopted in studies of the built environment.

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