

RESEARCH METHODS AIDING THE CREATION OF THE BUILT ENVIRONMENT FOR SENIOR CARE HOUSING FACILITIES

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Abstract

The main scope of the paper is to discuss the process of creating a research tool in the form of the List of Criteria for newly designed senior care housing facilities, which compiles the guidelines and requirements that newly created and easily accessible buildings should fulfill.

The achievement of the research objective was possible on the grounds of literature analyses of issues concerning users' needs and expectations that influence the creation of the built environment that is universal, easily accessible and takes into account different forms of disability and limited mobility, as well as on the grounds of the author's own quality analyses of care housing facilities for seniors. The output collection of data and guidelines enabled the construction of a useful research tools that may be practically utilized. They will be applied for assessing currently functioning care facilities before modernization. The tools facilitate the analyses of existing buildings, design of new facilities and creation of functional and spatial programs securing considerably higher functional quality standards.

Streszczenie

Głównym celem opracowania jest ukazanie procesu tworzenia narzędzia badawczego w postaci Listy Kryteriów dla nowoprojektowanych obiektów opiekuńczych dla osób starszych, wykazu zawierającego wytyczne i wymagania stawiane nowoczesnemu, dostępnemu obiektowi. Osiągnięcie tego celu było możliwe dzięki analizie literaturowej wiedzy dotyczących różnorodnych problemów, potrzeby i oczekiwań użytkowników, mających wpływ na tworzenie środowiska zurbanizowanego, uniwersalnego kształtowania środowiska dostępnego, uwzględniającego różne rodzaje niesprawności i mobilności oraz dzięki przeprowadzeniu badań jakościowym środowiska placówek opiekuńczych dla seniorów. Końcowy zbiór danych i wytycznych umożliwił zbudowanie użytecznych narzędzi badawczych, które można stosować w praktyce. Posłużą one do oceny funkcjonujących placówek opiekuńczych przed ich modernizacją. Przy ich użyciu można sprawnie prowadzić analizy obiektów już istniejących oraz tworzyć nowe ośrodki, budować dla nich programy funkcjonalno-powierzchniowe o znacznie wyższym standardzie użytkowania.

Keywords: The built environment; Quality analyses; POE(Post-Occupancy Evaluation); List of quality criteria.

1. INTRODUCTION

The assumptions for this paper is the discussion of the method leading to the creation of optimal living environment and habitation of the elderly in housing care facilities. The way to determine possibly most accessible built environment for the elderly is difficult, complex and time-consuming. It should be based on the information concerning seniors, their problems, needs and expectations as well as data on the architectural environment designed for the elderly, on the grounds

of the principles of Universal Design, ergonomics, binding design guidelines and standards.

The following elements were incorporated into the study:

- Literature analyses
- Observations of inmates in selected care facilities
- Analyses of the selected living conditions (following the modified POE method)
- Surveys, questionnaires, and interviews.

For efficient performance of quality analyses on the grounds of literature studies a research tool was compiled in the form of a Check List–List of the criteria for assessing senior housing care facilities before modernization. The List verifies the quality of existing and functioning care facilities and provides a tool for controlling the adjustment measures to secure the fulfillment of individual needs of their users.

The information derived from the literature studies and data from quality analyses resulted in the final List of the criteria that newly designed care facilities should fulfill. The List describes in detail the requirements that the facilities should fulfill such as the built environment, its surroundings and specific functional zones and rooms.

According to the assumptions, both Lists are tools that are useful in creating appropriate and friendly built environment for the elderly, enabling efficient analyses and formulation of the principles of decent living standards. They also facilitate the moderniza-

tion process of existing care facilities and speed up the programming phase and verification of newly designed buildings for seniors.

2. RESEARCH LEADING TO THE FORMULATION OF THE LIST OF THE CRITERIA THAT SENIOR HOUSING CARE FACILITIES SHOULD FULFILL

2.1. Diagram of the sequence of the conducted research activities

The diagram presented below illustrates the sequence of the research activities conducted in order to achieve the assumed objective, i.e. the formulation of the list of requirements that the built environment of senior care facilities should meet and the creation of the functional connections within a given senior care facility.

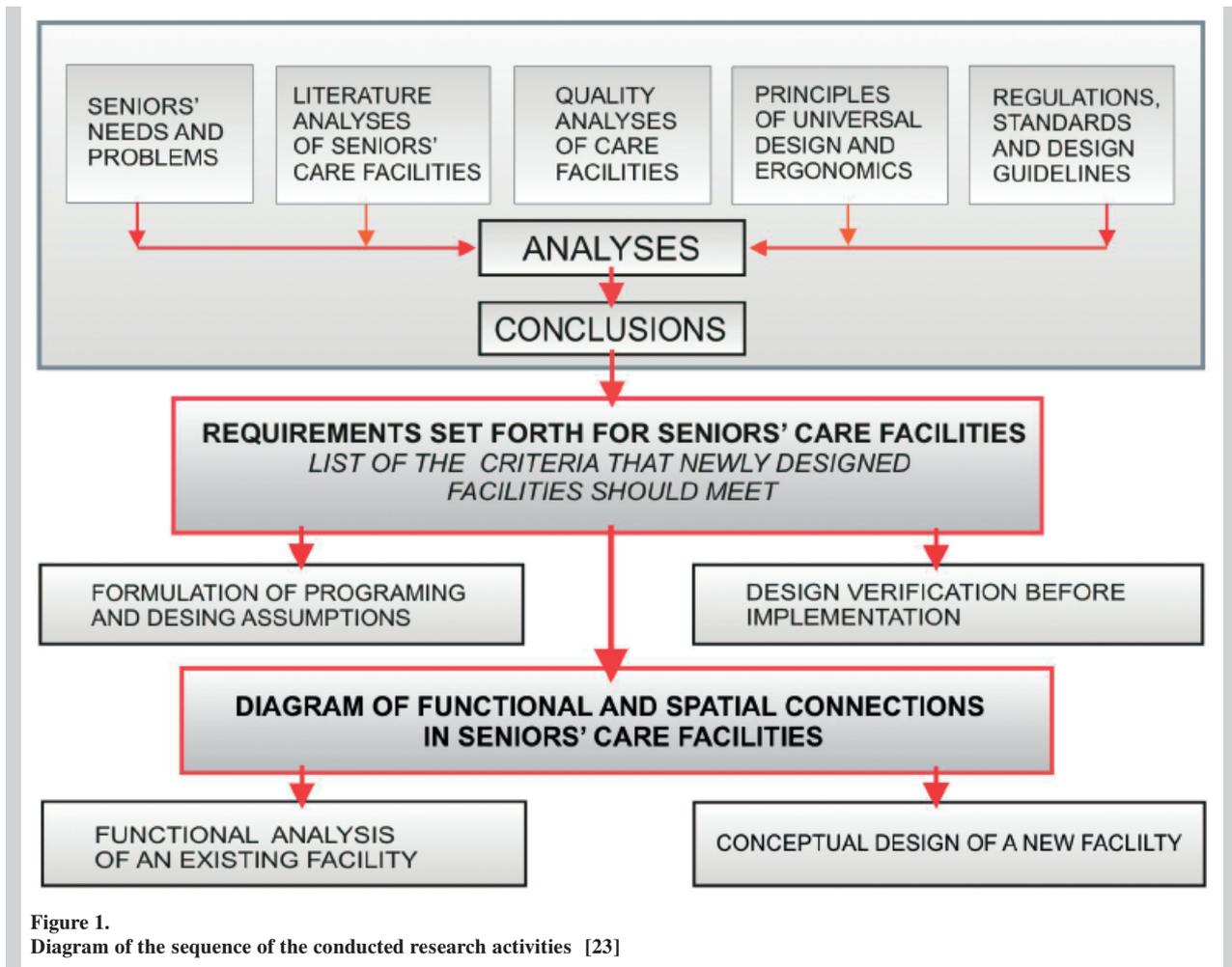


Figure 1.
Diagram of the sequence of the conducted research activities [23]

The data collected in accordance with the above diagram made it possible to obtain complex knowledge on the problems, needs and expectation of the elderly and information on the required architectural environment.

2.2. Studies and analyses of available literature publications

The mythological grounds were provided by publications concerning medical, psychological, sociological and pedagogical issues involved in gerontology, sociology and environmental psychology. All the information derived from the literature studies was considered from the architect's perspective, contrary to the physician's or sociologist's points of view, as it is the architect who perceives the limitations in the building that pose obstacles to its users, who are often elderly or/ and disabled.

Among Polish publications devoted to the issues concerning the sociology, psychology or social policy towards the elderly and their habitation conditions, the most important are: *A. Ostrowska* [1], *J. Szczepański* [2], *Z. Szarota* [3] oraz *L. Frąckiewicz* [4,5].

Furthermore, related literature studies on architectural and urban issues were also analyzed, although the scope of their interest does not entirely focus on the elderly and disabled users of the built environment. However, these issues were discussed by: *H. Skibniewska* [6], *A. Galkowski* [7], *H. Grabowska-Palecka* [8], *E. Kuryłowicz* [9,10], *E. Niezabitowska* [11], *H. Zaniewska* [12].

As far as the housing design for the elderly and disabled is concerned, the publications devoted to Universal Design and social accessibility and availability of the built environment were examined. Also, literature focused on social policy towards seniors and the disabled was taken into account, supported by the standards, regulations, ordinances and other documents and legal provisions in force [I,II,III,IV,V].

Among many international publications that deal with the issues of shaping the built environment and their accessibility, availability and adjustment to the seniors' and disabled people's needs, the following German authors also published in Poland should be mentioned: 1980 – Building for physically handicapped, *H. Kuldshun* and *E. Rosman* [13] and, in 1998 – Building for the elderly and disabled by *W. Meyer-Bohe*, supplemented with the foreword delivered by *Skibniewska H.* and the Introduction made by *Schwartz* [14]

An important Polish publication devoted to the discussed field is: Housing conditions of seniors in Poland. Current conditions and perspectives for change, which came out in 2001 and contained the results of studies carried out by *Inga Ogonowska*, followed by *Hanka Zaniewska* under the research project commissioned by the Polish Scientific Committee. The availability and accessibility of the built environment and public utility buildings to the elderly and disabled was also discussed by *Ewa Kuryłowicz* (1996): Universal design. Accessibility for the disabled [9], and in the 2005 publication: Universal design. Stockholm – a city for all [10], as well as in other papers of the same author including: Shaping the environment accessible to everybody – an approach currently implemented by European countries, its assumptions, objectives and ambitions.

Another source of invaluable information is the Ph.D. dissertation dated 2004 and written by *H. Grabowska-Palecka*: The disabled in heritage zones and sites. Problems with accessibility, where important issues concerning the accessibility of the urban tissue to the disabled are discussed. [8]

As far as English language publications are concerned, the 1996 book entitled: Environmental Psychology, by the authorship of *P.A. Bell, T.C. Greene, J.D. Fisher, A. Baum*, focused on the relationships between the people, the environment and connections between the space created by people and their behaviors and psychological comfort in their habitation space, published in Poland in 2004, under the working title of: “Environmental psychology” should be mentioned [15].

Studies on the connections between the quality of the built environment and users' needs were incorporated in *W. Preiser's*: Post-Occupancy Evaluation, 1988 [16] and Building Evaluation, 1989 r. [17]

In Poland, the issues concerning the housing environment for the elderly and disabled have been undertaken by specialists of many fields of science: for example, *Augustyn Bańka* – psychologist, who collaborates with architects: *Maria Lewicka* – both an architect and a psychologist, and *Lucyna Frąckiewicz* – specialist in social policy, and architects: *Krzysztof Lenartowicz, Elżbieta Niezabitowska* and *Andrzej Niezabitowski*.

Other main publications in this field include the 1983: “Behavioral grounds for architectural design” [18] and the 2002: “Social environmental psychology” written by *A. Bańka* [19].

The issues concerning people's needs in the built

environment and determining the dependence between the shape of this environment and human behavior, including: the quality of life, were extensively analyzed by Elżbieta Niezabitowska., whose most important publications include the chapters contained in the three Volumes of the TEMPUS: Quality and Management of Architectural Space” dated 1998 and 1999 and the 2007 publication: Quality analyses of the built environment and their importance to the development of the intelligent building concept [20,21].

Furthermore, the building and legal regulations concerning spatial planning were analyzed, as well as the standards and requirements. In the Polish law, the regulations on the needs and requirements of the elderly and the disabled concerning housing conditions and its adjustment, furnishings and surroundings are stipulated in [VI,VII,VIII,IX,X]. They have been amended to adjust the Polish standards to the EU requirements. All the amendments are aimed at improving the standards of living and enabling the elderly and the disabled to lead an independent life, without the need of turning for help.

The knowledge obtained in the course of the analyses of the literature devoted to the subject in question gave the grounds for formulating the initial quality criteria to compile the Check List that could be useful in assessing the conditions and quality of a given care facility or building in the course of which the Criteria List was used as a tool checking and verifying current conditions of existing senior housing care facilities.

2.3. Quality analyses

Another source of information useful in creating the final list of requirements was the author’s own research conducted on the selected group of existing and currently functioning housing care facilities for the disabled. The research was focused on the needs of the elderly and disabled in view of the built environment such as housing facilities, and specific dependence between the quality of the examined facilities and their users’ needs regarding space functionality. The research was carried out in 2005-2008 and concerned six care facilities located in the Silesian District and three care facilities in the USA, the state of Maine. (*M. Bielak* [22],[23])

Research tools

For efficient analyses, and data collection in the course of quality analyses, a tool was created in the

form of The Check List Criteria for senior housing care facilities. The List facilitates the adjustment of a given care facility to individual needs of their inhabitants in terms of: functional, behavioral and technical quality.

The List was compiled in the form of a table, which eases data analyses, collection and verification, as well as systematic gathering, sorting and analyzing of the information and efficient photographic documentation [22].

In the process of the List compilation the data obtained from literature studies and from Polish standards and guideline concerning housing care facilities for the elderly were taken into account.

The Quality Criteria List emerged to address effective analysis of the functioning of several chosen care facilities. It provides a simple and universal tool for quality analysis, aiding the process of estimating the investigated buildings.

According to the List, it is possible, in logical terms, to describe, step by step, the issues concerning specific functionality aspects of buildings, to detect and describe the parameters that determine either its high or low quality (advantages and disadvantages). The information and comments collected and written down in the Table in the course of the research, round-ups and observations, constitute a legible set of data on the basis of which final conclusions on future guidelines for modernization works or strategies for future development of given facilities may be drawn.

The researched facilities were subjected to analyses in accordance with the general list of quality criteria: [22]

- **Location:**
 - The surroundings and vicinity of the site
 - The site/ lot spatial management plan
- **The image and attractiveness of the building for users and visitors**
- **The building:**
 - Technical issues
 - Maintenance
 - Safety
- **Internal environment, microclimate:**
 - Air quality inside the building
 - Temperature conditions inside the building
 - Sunlight and artificial light
 - Acoustic conditions (noise level).

- **Efficiency of using the floor area: communication**
- **Functional quality of space:**
 - Internal zones and specific types of space.

In the course of the research the problem of adjusting internal parts of space to specific requirements and needs of social processes and activities that take place therein were examined. The furnishing and equipment of the examined zones were analyzed in view of the needs of the disabled, including the alarm and warning systems, fire alarms and their current conditions.

Furthermore, functional connections of specific zones and accessibility of space in the examined buildings were analyzed. The main consideration was the safety of the inhabitants, of their property and of the occurrence of architectural barriers.

Methods used in the course of the analyses

Effective analyses involved in the discussed research were aided by POE (Post-Occupancy Evaluation), which is a method of assessing the functioning of urban environments in the phase of their use. In its classic form, the method makes it possible to diagnose the technical, functional and behavioral quality of buildings (according to Preiser, Rabinowitz and White); whereas, its extended version also involves organizational and economic aspects (Dres and facility managers). For the sake of research of senior housing care facilities, the method was also modified, concentrating not only on the technical quality but also on the functional and behavioral aspects.

In the course of the quality analyses of specific facilities the main focus was on three major issues: criteria of efficient performance of the building, groups of users (inhabitants and personnel), “external” space (assessment of location, neighborhood, surroundings of the building) and of the “internal” space (rooms and their furnishings) [22].

The quality analyses entailed the assessment of the current conditions, examination of the effectiveness of the use of floor area, appraisal of particular functionality zones and their furnishings, examination of interconnections of functional spaces to find out if they support unobstructed performance of the tasks that facilitate efficient mobility and communication.

The analyses were based on available architectural and building documentation concerning the examined facilities, observations made in the course of on-site rounds, local inspections (inventory of the equipment, furniture, fixtures and fittings) and observa-

tions of the users’ behaviour in specific environments (of course respecting their privacy), interviews, questionnaires and surveys conducted among all groups of users [22].

The behavioural quality assessment, involving the users’ requirements towards the building that they occupy, was based on elements that were not easy for objective judgement, including: comfort, convenience, satisfaction, pleasure derived from habitation, issues involving the aesthetics of the internal and external space and its impact on the mood, psychological condition and health of the inhabitants. Other essential elements of behavioural quality were: privacy, territoriality, way-finding, legible visual or audible information and the sense of safety [22].

The following techniques were applied in the conducted research:

- Analysis of available architectural and building documentation of the discussed senior care facilities.
- Photographic documentation of the buildings and their surroundings.
- Rounds and observations of the buildings.
- Inventory of the equipment, furnishings, fixtures and fittings in the buildings.
- Observations of users’ behaviour in the built environment.
- Surveys conducted among the users of the buildings.
- Interviews and conversations with managers and users.

In the next step, the performed quality analyses were applied to assess the current conditions of the discussed facilities, and the resulting conclusions to define new standards that senior care facilities should meet, followed by the compilation of the List of Quality Criteria – requirements set forth for newly designed facilities.

The priority objectives of the discussed research included:

- Identification of the quality of the built environment of senior housing facilities set against current and real needs and requirements of particular groups of users.
- Assessment of the level of fulfilling users’ satisfaction.
- Creation of cultural and user-friendly require-

ments that the built environment should meet.

- Explicit determination of the needs and requirements of particular groups of users towards the building that they occupy.
- Formulation of the most fitting social conditions, standard of living, occupancy and work in given facilities.
- Creation of a proper image and aesthetics of specific functional zones for the users of the facilities.
- Creation of high comfort of space utilization (privacy, territoriality, intimacy, psychological disposition).

To secure the efficiency of the analyses, the entire space of the discussed senior care facilities was initially divided into three basic types of functional zones (which enabled the ordering of the research activities and facilitated its performance), in accordance with which specific analyses and quality assessments were carried out:[22]

General access zone:

- Main hall, entrance zone
- Meeting and visitors' room
- Public space.

Private zone:

- Housing and daily use zones
- Hygienic and sanitary facilities.

Supporting zone:

- Medical zone – doctor's surgery, nurses and medical procedures room, room for volunteers, therapy and rehabilitation rooms, social rooms for medical personnel and sanitary facilities.
- Administrative part – office rooms.
- Technical service rooms – kitchen, laundry, security, store for cleaning materials, installations.
- Social rooms for the staff, sanitary facilities.
- Supporting and assisting rooms.

The above mentioned issues concerning preparatory and initial activities, such as: definition of the main task, adoption of research methods, definition of particular tasks to be performed and preparation of the research tools, all contributed, to a large extent, to improving the research process. All the preparatory tasks facilitated the implementation of the quality analyses and helped to systematize the data collected on particular spatial zones and on the entire facilities, on the grounds of which quality guidelines for senior care facilities could be formulated.

2.4. Examination of the discussed senior care facilities

The subject of the conducted quality analyses were senior care housing facilities and the relations between the functional quality of the internal environment and the users' needs regarding space. In 2005-2008 studies were conducted on six senior care facilities located in Silesia and three facilities in the USA, State of Main. At the turn of 2008/2009 similar check-up studies were carried out in four of the six previously analysed care facilities. [22]

The studies contained detailed descriptions of the functioning of the facilities, their specific zones and manners of utilizing the buildings by their users. Special attention was paid to the obstacles and irregularities in the functioning of this type of the built environment. Each of the discussed facility was analyzed as a set of interacting and intertwining aspects determining the entire quality of the built environment.

The data collected in the course of the research was compiled in Tables, to facilitate a systematic approach, analyses and legibility of the discussed problems. [22]

Basing of the logics of the List of Categories both positive and negative aspects of specific functional zones of the built environment were presented in reference to the discussed senior care facilities. Each of the problem was also supplemented by opinions expressed by the groups of users of a given facility and derived from surveys, interviews and conversations.

3. CONCLUSIONS DRAWN FROM THE QUALITY ANALYSES

The final outcome of the conducted quality analyses was compiled in the Table:

Quality requirements for senior housing care facilities [23], presenting the conclusions concerning the improvement of standards of living and guidelines for shaping proper environment for the elderly.

The Table presented below contains the data compiled in selected quality categories drawn from the entire list of the criteria, in consideration of: safety, location and functional quality of space.

Table 1.**Quality requirements for senior housing care facilities – excerpts ([23] p.188-191)**

QUALITY REQUIREMENTS FOR SENIOR CARE FACILITIES
<p style="text-align: center;">LOCATION, VICINITY OF OTHER SITES/ PLOTS</p> <ul style="list-style-type: none"> • Location of the site/ plot in safe and quiet surroundings, among the green and not in the vicinity of structures that pose environmental or other type of nuisance. • Facilitation of social contacts and maintenance of the independence of the inhabitants by providing them with easy access to the centre of the city, housing estates, commercial, cultural and medical services. • Good communication with the city centre (private and public transport). • Provision of legible access to the site. • Availability of green and recreation areas.
<p style="text-align: center;">SITE MANAGEMENT</p> <ul style="list-style-type: none"> • Provision of convenient and legible walking and driving access and sufficient space for parking places for the inhabitants, working staff and visitors. • Optimal intensity of site development, in consideration of the right proportions between the building as such and the green areas, access ways and drives. • Creation of comfortable and spacious forefront before the main entrance that could serve image-affecting and representation functions. • High quality of space, functional and aesthetic site management, use of small architecture objects, green spots. • Proper location of the building in view of the geographical directions. • Elimination of all architectural barriers, consideration of the needs of the disabled. • Safety of the site and occupancy. • Elimination of negative impacts: isolation from busy roads, noise emission sources and excessive sunlight. • Isolated delivery squares with convenient access. • •
<p style="text-align: center;">SAFETY</p> <ul style="list-style-type: none"> • Location of the building in safe neighborhood. • Fencing and monitoring. • Provision of maximal safety with minimal isolation (monitoring of entrances to the building- automatic control system, registering people crossing the entrance). • Fire protection system (fire alarm, sprinklers, marked evacuation routes) and paging / call systems. • The building and its surroundings are to comply with the standards and regulations of the Building Law. • Absence of architectural barriers, complete adjustment to the needs of the disabled.

FUNCTIONAL QUALITY- excerpts**GENERALLY ACCESSIBLE SPACE**

- Decentralizing and prioritizing of generally accessible zones, from commonly shared zones to more private spaces for given groups of inhabitants.
- Functionality of spatial partitions – adequate adjustment of rooms to the types of activities that take place therein.
- Functional management and proper furnishings of generally shared space.
- Provision of sufficient space in the entrance zone, with places for seating, cloakrooms, access to toilet facilities.
- Situation of the reception in the entrance zone to facilitate enquiries, access control, monitoring centre and visual information on the arrangement and functions of the interior space.
- Creation of the observation sector in the vicinity of the entrance zone so that inhabitants could have visual contact with the external world.
- Creation of aesthetic and well equipped leisure or resting annexes for meetings, conversations (along the communication routes).
- Arrangement of private rooms for visitors and meetings.
- Provision of additional support services that improve the quality of habitation: shop, café, hairdresser, hobby rooms, workshops, winter garden, fitness room, library, chapel, isolated smokers' room, etc.
- Securing contact with nature by the use of glazing, orangery, winter garden.
- Formation of the internal space in a manner that promotes familiarity with the surroundings and good disposition, exerting a positive impact on the psychological condition of the inmates.
- Complete elimination of architectural barriers.

PRIVATE SPACE

- Consideration of high safety level and psychological needs such as privacy, territoriality, sense of intimacy and “independence”.
- Elimination of any and all architectural barriers.
- Provision of privacy by arranging single or double rooms.
- Legible location of rooms and easy access for the inmates.
- Furnishing each room with a bathroom, possibility of using a kitchenette (individually required by single inhabitants or couples).
- Maintenance of high aesthetic quality, individual character and proper furnishings of the rooms (possibility for the inhabitants of having their own furniture and equipment).
- Ergonomic furnishing, easy to use equipment, adjustment to seniors' individual needs, made of natural, healthy and non-toxic materials.
- Provision of alarm and call systems in the rooms.
- Securing nice views from bedroom and living room windows (contact with nature).
- Designing the habitation zones in a manner that facilitates easy availability of nursing personnel for seniors who need medically-assisted living conditions.

The data compiled in the above table derived from quality analyses directly contributed to the creation of the database about the requirements that care

facilities for seniors should meet. The collected information, supported by design standards and guidelines gave grounds for the formulation of the quality crite-

ria that newly designed housing facilities for seniors should fulfill.

3.1. List of criteria for newly designe care facilities for seniors

The total outcome of the conducted research are the guidelines compiled in the Table: List of criteria for newly designed care facilities for seniors. The Table sums up the conclusions drawn from analyzing the collected information on seniors, their problems and needs and the results from the author’s own studies

on the bases of universal design principles, ergonomics, design standards and guidelines.

The List concerning specific quality categories (technical, functional and behavioural) presents, in a logical way, the “feedback” to the needs of particular groups of users in the view of the built environment of seniors’ housing care facilities.

The Table contains the requirements that a care facility should meet, as well as its surroundings and specific functional zones and rooms – see the excerpts from the Table presented below.

Table 2.
List of the criteria for newly designed housing care facilities for seniors- excerpts. ([23] p.188-203)

REQUIREMENTS FOR HOUSING CARE FACILITIES FOR SENIORS	
NEIGHBORHOOD CONNECTIONS	REQUIREMENTS FOR PARTIULAR ZONES
SURROUNDINGS OF THE BUILDING–PRE-ENTRANCE ZONE	
Access to the building and its vicinity – site management	<ul style="list-style-type: none"> • Location of the building in a safe area to offer maximal safety with the concomitant minimal isolation. • Provision of comfortable, legible access roads and walking access with sufficient parking places for the inhabitants, staff and visitors. • Complete elimination of architectural barriers. • High quality of space, functional and aesthetic site management, proper situation of the building in view of the geographical directions. • Endowing the building with a housing character and abandoning its institutional nature – one of the most essential requirements of the inhabitants. • Creation of comfortable and spacious foreground in front of the entrance zone, serving a representation a function. • Entrances to the building should be minimally 1.5 m wide (both for driveways and pedestrian access roads), whereas at least one entrance or its part should be adjusted to the disabled (§16,1). [VIII]
GENERALLY ACESIBLE SPACE- ENTRANCE ZONE	
Zone for visitors, enquiries, access control Serving the function of contacts promotion and informal meetings <ul style="list-style-type: none"> • Vicinity to the entrance 	<ul style="list-style-type: none"> • The entrance door should be equipped with eclectically-controlled automatic opening system. When the doors and their frames are made of transparent materials and safe-proof glass, good visual marking is required – easily perceptible. • The entrance doors to the building, the shape and dimensions of entrance zone should facilitate convenient mobility, also for the disabled (§61.1).[VIII] • The minimal width of the door openings in light should be at least 85 cm, the minimal maneuvering space at the doors should be 150x150 cm – at the side drive; 120x190 cm – at the front drive [10].

<ul style="list-style-type: none"> • Connections with the administrative part, visitors' room and meeting room 	<ul style="list-style-type: none"> • After entering the building there should be an easy and legible way to the ramp, stairs and lifts. The interiors should provide good and legible visual information (in colours), signs and marks facilitating orientation in space should be well-lit, also with artificial light. • Signs on the doors, information boards and orientation leading clues should be in capital letters, easily readable and well-lit. • There should be a reception, enquiries and access control counter. It should be easily accessible for people in wheelchairs and have a rounded form. In its vicinity visual information on the layout and specific functions provided by the building should be placed. • Lifts should be located next to the entrance zone, they should be easily accessible and marked. • Lifts for seniors and the disabled are, in the majority of cases, the only way of reaching upper floors; thus, their location in the building should be well-planned. • The Polish standards stipulate that the buildings destined for permanent habitation, and each of their separate parts (segments) should have at least one lift suitable for general communication/ mobility of people in wheelchairs or on stretchers (§193.2). [VIII] •
<p>GENERALLY ACCSSIBLE AND COMMONLY USUED SPACE FOR INMATES</p>	
<p>Zone of contacts between visitors and inmates</p> <p>Vicinity to the housing zones, medical care and kitchen</p>	<ul style="list-style-type: none"> • The space occupied by the habitants at day time. • The zone consisting of the functions that make the stay of seniors attractive and improve the quality of occupancy. • The meeting room – day care and television room (with separately isolated spacer from where newly admitted inmates may observe their new surroundings; creating opportunities of adjusting to their new life situation). • Visitors' and meeting room – the atmosphere should promote privacy and intimacy. It should be situated next to the general entrance zone. • The commonly available zones should include: TV room, library and reading room, chapel, cafe, hobby rooms (workshops, winter garden, glass plants room, dining room, etc. [III] • Apart from the TV room there should also be a quiet, isolated room for resting far away from the noise and also easily accessible-just like other living and dining rooms. • The commonly shared spaces should also include: gym/fitness room, therapy rooms, swimming pool with showers and hairdresser. • There should also be a smokers' room and generally accessible toilets [III] • It is also required to provide sufficient generally available space and its flexibility to be adjusted to diverse functions.....

The compiled data presented in the Table extended by issues associated with the creation of the micro-climate inside the building and specific design guidelines concerning the planning of flats, as well as the proposed diagram of functional interconnections in

seniors' care facility (all discussed against the background of universal design principles and design standards), make up the catalogue of data on the requirements set forth for newly designed senior care housing facilities [23].

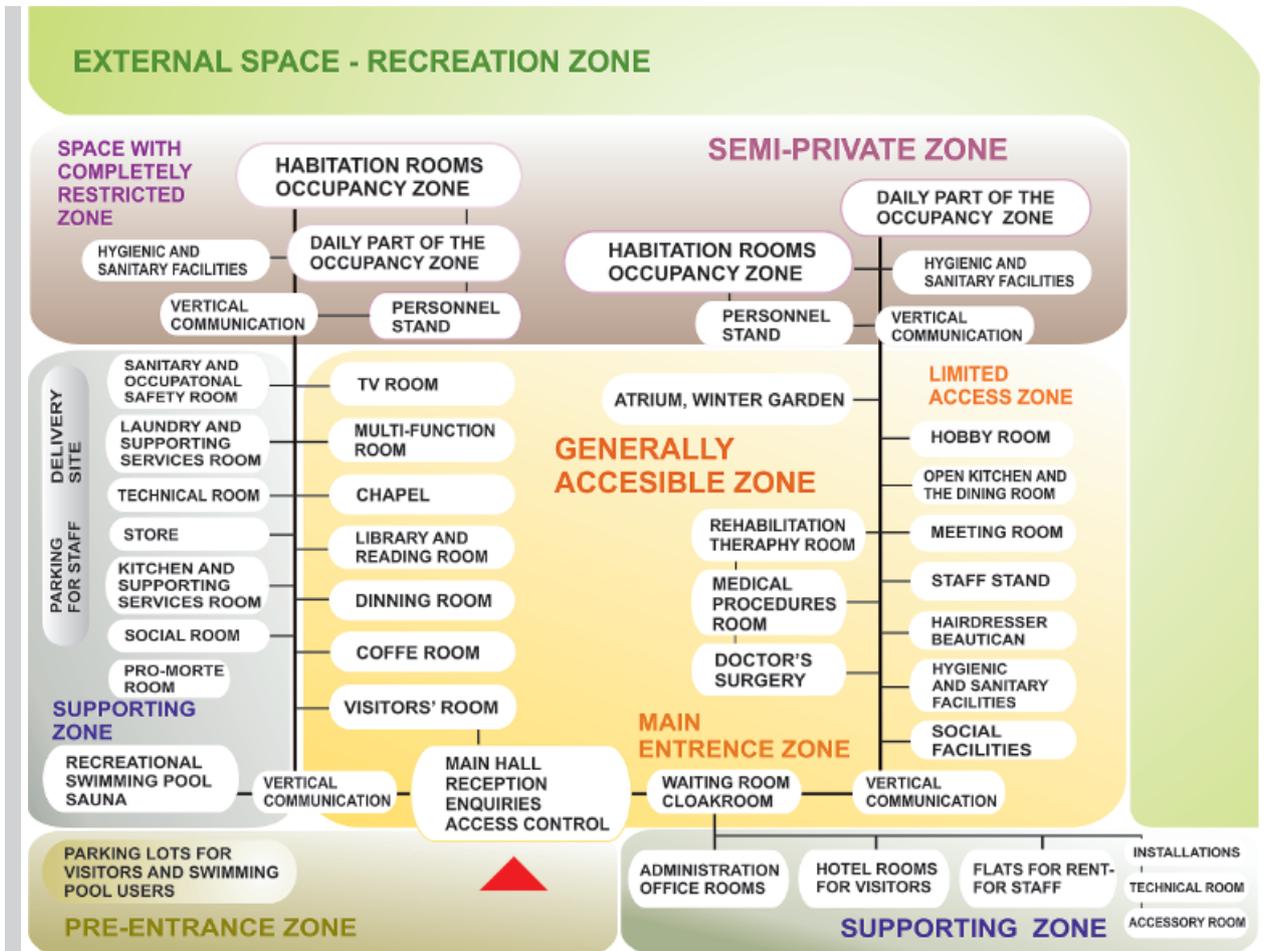


Figure 2. Diagram of functional interconnections in seniors' care housing facilities [23]

The knowledge acquired from literature overview and supported by the conclusions from the conducted quality analyses provided the bases for the creation of the Diagram of Functional Inter-Connections, illustrating the most convenient and advantageous relations between specific functional zones of housing care facility for seniors.

4. CONCLUSIONS

Time-based application of specific methods in the research Project resulted in the construction of useful tools that may be utilized in practice.

The list of the criteria for assessing the building before modernization may be also used for estimating the functionality of existing facilities [23].

The list of the criteria that newly designed facilities should fulfill may assist the programming and formu-

lation of spatial principles to enable effective verification of the architectural design before its implementation [23].

Basing on the Diagram of Functional Inter-connections, existing senior care facilities may be analyzed and their functional arrangements checked, new facilities may be designed and functional-spatial programs formulated to provide higher quality living standard and building performance [23].

Practical applications of the discussed research tools may directly contribute to the improvement of living standards of Polish housing care facilities for seniors and, in the near future, lead to the design and construction of buildings providing accessible and safe environment for the elderly, comfortable, decent life and satisfy their individual needs to create space that feels like home.

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- II. Narodowa Strategia Integracji Społecznej (NSIS) – dokumenty przygotowane przez Zespół Zadaniowy do Spraw Reintegracji Społecznej, któremu przewodniczył Minister Gospodarki, Pracy i Polityki Społecznej. Zespół został powołany 14.04.2003 r. przez Prezesa Rady Ministrów, (in Polish)
(National Strategy of Social Integration (NSIS)–the documents prepared by Task Team for Social Re-integration Matters chaired by the Minister of Economy, Work and the Social Policy. 14.04.2003 the team was qualified by President of Cabinet)
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(Decree of Minister Labour and Social Policy dated 19 October 2005 regarding social aid houses)
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(Construction in Low Act dated 7 July 1994)
- VII. Rozporządzenie Ministra Gospodarki Przestrzennej i Budownictwa, z dnia 14 grudnia 1994 r., w sprawie warunków technicznych, jakim powinny odpowiadać budynki i ich usytuowanie, a następnie – Rozporządzenie w sprawie warunków technicznych, użytkowania obiektów budowlanych (Dz.U. Nr 10, z późn. zm.), (in Polish)
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