

Senior Housing: Typological Innovation via Mixed Use Architecture for Social Integration and Wellness in Italy

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Abstract: Despite public and private investments in the senior housing sector, an alternative to retirement homes is not yet truly present in Italy, except for a few rare cases. The spots in residential facilities for the elderly are limited and not enough to fill a demand for spaces that is continuously increasing. Another underlying problem is that the type of user that senior housing is aimed at is not currently considered by the Italian market; the impact of factors that can decrease the quality of life in elderly people, such as loneliness, lack of physical activity or loss of routine is underestimated. This set of negative factors promotes the opposite of what is considered active aging. In recent years senior houses, intended as a residential typology for self-sufficient elderly people, have undergone a significant evolution, reflecting social, demographic and technological changes; this reflects a paradigm shift in the way society approaches care to the elderly, focusing increasingly on autonomy, personalization and well-being. From 2010 to 2024, there has been greater attention towards customization of programs and spaces dedicated to the elderly, with the aim of offering services that meet everyone's specific needs. Senior houses are becoming more oriented towards a wellbeing-based approach and are starting to focus on social inclusion as well, promoting recreational and cultural activities to improve the quality of life of elderly guests. A strategy used for social inclusion is to dedicate part of the project to functions open to the public (kindergartens, community centers, spaces for associations, etc.) so that the project fits into the urban level of the city by interacting with it. The proposal is to integrate cultural spaces with senior housing in a way that the elderly residents can become the keepers and narrators of local heritage, creating intergenerational communities.

Key words: Senior housing, mixed use, social inclusion, health, wellness.

1. Problematic Area Identification: Study of Data and Policies on Aging in Italy

According to data shared by the Istat (Italy National Institute of Statistics) in 2022, Italy is an increasingly older nation. The old-age index (given by the ratio between the population over 65 and the population under 15) has increased from 33.5% in 1951 to almost 190% in 2022 [1]. The presence of elderly people in Italian demography has, in reality, been increasingly significant year after year since the early 2000s: according to forecasts, considering the decline in the birth rate and the old-age index, in 2050 there will be one young person for every three elderly people.

Furthermore, considering what was stated during the 63rd National Congress of the Italian Society of

Gerontology and Geriatrics [2], elderly people of 2022 who are 75 years old correspond in physical and mental characteristics to those who were 55 years old in the 1980s. We are therefore talking about a category of users that is radically different from that of the past, on average with a higher level of education, with a pension and for whom old age is a new phase of life in which they can use their time for their own interests and passions, rather than solely resting and spending time with family, as was previously expected. This progressive aging of the population is generally accompanied by loneliness: 2.5 million elderly people live alone, a full 40% of the population over 74 [3]. This statistic is also progressively increasing year after year: according to demographic projections, in 2045 the elderly living alone will become 3.6 million. For almost a decade now,

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the concept of active aging has been recognized as a social right, defined by global institutions as one of the factors for the creation of a sustainable and accessible society for all ages. Quoting the World Health Organization (WHO), active aging is defined as “the process in which opportunities for health, participation and security are optimized to improve the quality of life of people as they age.” [4]. In fact, numerous scientific studies have shown that staying physically and mentally active during old age helps to combat various pathologies typical of this age group.

Currently, in Italy, the types of housing dedicated to seniors are limited and heterogeneous among themselves and we mainly talk about Residential Health Care Facilities (in Italian, RSA Residenze Sanitarie Assistenziali) dedicated to non-independent elderly people who require the constant presence of medical personnel; at the same time, a new type of social housing for self-sufficient elderly people has spread in Northern Europe and the United States in order to make this phase of life less solitary and inactive and more social: senior housing. Senior houses are a type of housing composed of modest-sized apartments inserted in a socializing context of common spaces and services in which guests are free to socialize and live independently surrounded by peers with the same needs; they do not provide for the presence of medical personnel, but depending on the organization that manages the facility, the presence of personnel for the entertainment and management of common spaces may be provided. In Italy it is still a typology that is not very widespread and fragmented, even if this reality is changing: during the general management of the National Social Security Institute of Rome on 21/12/2021 the first public-private partnership project between the National Social Security Institute (INPS, Istituto Nazionale della Previdenza Sociale), the National Social Security Fund for Engineers and Architects (Inarcassa, Cassa nazionale di previdenza ed assistenza per gli ingegneri ed architetti liberi professionisti) and the National

Social Security and Assistance Agency for Psychologists (ENPAP, Ente Nazionale di Previdenza ed Assistenza per gli Psicologi) in the senior housing sector in Italy was presented [5]. Through this partnership, a 500-million-euro fund was set up to plan investments dedicated to senior housing, with the aim of designing new residential structures for self-sufficient elderly people, following the objectives of the National Recovery and Resilience Plan (PNRR, Piano Nazionale di Ripresa e Resilienza) in the development of new social infrastructures.

When we talk about “elderly” we usually refer, in studies and scientific literature, to an age group that includes individuals aged 65 and over. The concept of “elderly”, in contemporary times, is more of a convention than an actual compact category of people: quoting the Risk Society Theory of the German sociologist Ulrich Beck [6], in our society there are zombie categories, social categories to which an idea well identified by individuals belonging to a given society is associated, an idea that in fact no longer exists. Among the zombie categories there is also the category of chronological age. The actual category of elderly people is able to manage their basic needs without the need for constant assistance, but can still benefit from living environments specifically designed to promote well-being and comfort, as well as to combat the great enemy of the contemporary elderly: loneliness. It is demonstrated by accredited scientific sources [7, 8] that loneliness, through behavioral, psychological and physiological mediators, is one of the great enemies of psycho-physical well-being for the entire population and, in particular, for those groups of it that are more fragile. Loneliness is a phenomenon of such relevance that it affects various scientific fields, especially medical ones, considering its bad effects on the psycho-physical state of the individual. For example, in the United States, it was defined a real “epidemic of loneliness and isolation” [9]; this condition has certainly been exacerbated by the recent COVID-19 pandemic. To limit social isolation, there

are day centers for the elderly and, in residential or semi-residential structures, common spaces are contemplated. In these cases, however, it is not a given that a sense of community and interpersonal relationships will actually be created that will effectively combat the sense of loneliness that pervades the lives of the elderly.

2. Architecture and the Third Age: Analysis of Critical Issues and Potentiality

Aging is a process that has affected all ancient and modern human civilizations: it is an irreversible, inevitable process that can be interpreted both as a problem and as an opportunity. The elderly were not dedicated residential typologies strictly reserved for their needs.

Hospitality for the elderly as a main target is a relatively modern concept: during the 1940s and 1950s, in the United Kingdom and the United States, geriatrics, a medical discipline dedicated to the study of the condition of old age and the fight against diseases that can affect the quality of life during it, became established. In the same years, in Italy, the SIGG (Italian Society of Gerontology and Geriatrics) was founded in Florence, with the aim of promoting and organizing studies on the social and medical aspects of old age; at university level in Italy the theme will develop during the 1960s.

Following this revolution in the medical field, the hospice typology from the 1800s is replaced by retirement homes, collective buildings for the elderly with varying degrees of self-sufficiency, composed of rooms for residents and collective spaces; the presence of nursing staff was expected to assist the residents of the facility. Despite this, most of the elderly preferred to remain in their own homes until forced to do so for health reasons; a preference also supported by the negative connotation that had been associated with the hospice typology until then.

In 1964 in Denmark, the architect Jan Gødmand-Høyer, dissatisfied with modern housing typologies, began to theorize the housing model of the *bofællesskab*,

which can be translated as “living together” and later called, by the American architects McCamant and Durrett, co-housing [10]; the discussion would be kept alive for the rest of the 1960s and 1970s by articles such as “Children Should Have 100 Parents” (B. Graae, Politiken) and “The Missing Link Between Utopia and the Dated One Family House” (J. Gødmand-Høyer). The main objective is to generate a new way of living in a social and mutually supportive way, in a typology that alternates individual and private housing units with common spaces and services, in order to counteract the loneliness and lack of an active neighborhood typical of the contemporary city. The first co-housing project, called Sættedammen and designed by Theo Bjerg, was born in 1972 in Hillerød, a town near Copenhagen, from the desire of twenty-seven families to live in a more communal environment [11]. The complex offers interesting architectural ideas both on a social and typological level, with the flexibility of the spaces provided by the homes, designed with beams with mobile partitions that can be adapted to the needs of the users. The twenty-seven housing units are spread over two floors and are organized in a ring with respect to the common green areas, in a functional layout that fluidly connects the private spaces and the common and semi-common spaces of the project (Fig. 1). The co-housing is still active today, in 2025, and most of the common spaces are managed by the tenants.

The first senior co-housing reality is that of Midgård (1987), designed by Duvå and Lund-Hansen: it is a project that does not require the presence of medical personnel and that is aimed at a senior population that is completely self-sufficient or slightly non-self-sufficient, in which mutual support among residents is encouraged. The Midgård project was received very positively both by the eighteen residents and by the rest of the world, creating interest as far as the United States and proposing a model that tries to combat loneliness among the elderly [12]. Currently, the senior housing sector is constantly growing and evolving: it is a sector that stimulates particular interest both for the

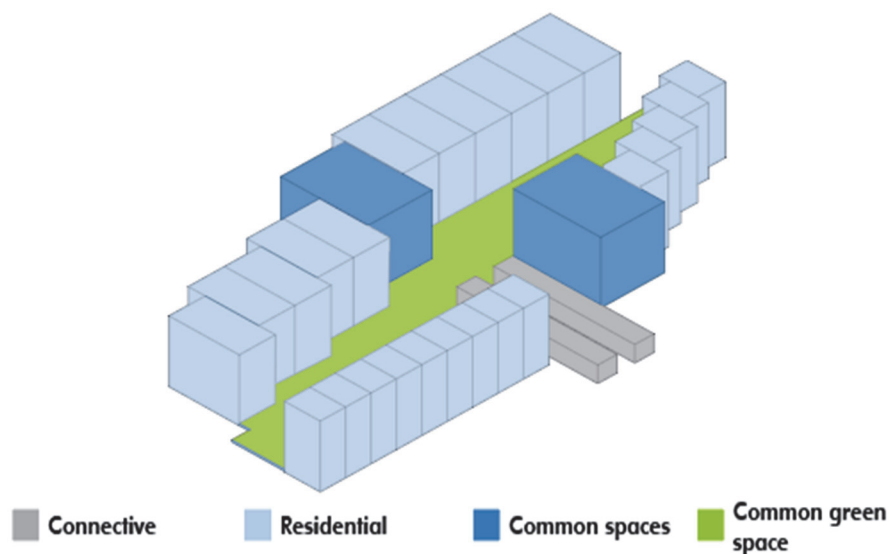


Fig. 1 Sættedammen functional diagram.

innovations that can be introduced, and because it is a particularly active economic segment in which investments continue to be made. Despite public and private investments in the senior housing sector, an alternative to nursing homes is not yet truly present in Italy, except for a few rare exceptions: the phenomenon of senior housing seems to be more accentuated in Northern Italy, particularly in Lombardy. The number of beds in residential facilities for the elderly in general, without considering the type of user, is limited and is not enough to fill a demand for places that is constantly increasing [13].

At a regulatory level, current residential typologies for self-sufficient seniors are organized as a set of rooms, single and double, organized around two types of common spaces, lounge and dining room. This organization of the housing units through rooms and beds is taken up by some senior house projects, but, in most cases, the housing units in senior houses are intended as small apartments with private facilities; in this way, the environment tends to be perceived by the user as familiar and domestic. Furthermore, as common spaces, the lounge and dining room very often fail to create a sense of community and cohesion among residents: spaces intended for specific aggregative functions are needed, to stimulate residents to meet and help each other.

At an architectural level, one of the benefits of senior housing and senior co-housing is that they are typologies that can be inserted efficiently into existing buildings, presenting opportunities for the refunctionalization of historic buildings and disused areas, fighting land use. In some senior house projects, the idea of setting up some areas as public spaces for the community or managed by private entities for commercial activities is already contemplated; in cases of re-functionalization, it could be interesting to think of functions that can be integrated into the different contexts of the pre-existing buildings in which a senior house is inserted, obtaining multifunctional buildings, in which public spaces and private spaces are balanced with each other in order to allow both social inclusion and privacy for guests.

3. Typological Innovation: Towards a Context of New Social Integration

Through the introduction and study of several senior house projects considered innovative compared to the model proposed by the Italian legislation, the innovation factors of the typology will be studied and the additions and modifications to the functional program will be outlined for a senior house that has the potential to increase physical, mental and social well-being and to allow one to maintain one's autonomy.

In recent years, the typologies of self-sufficient nursing homes for the elderly have undergone a significant evolution, reflecting social, demographic and technological changes. The evolution of nursing homes reflects a paradigm shift in the way society approaches care for the elderly, increasingly focusing on autonomy, personalization and global well-being. From 2010 to today, there has been an increased attention on the personalization of programs and spaces dedicated to the elderly, with the goal of offering services that meet the specific needs of each individual [14]. There is an increasing orientation towards an approach based on well-being and social inclusion, promoting recreational, cultural and therapeutic activities to improve the quality of life of the guests. One strategy used for social inclusion is to dedicate part of the project to functions open to the public (kindergartens, community centers, spaces for associations, etc.) so that the project fits into the existing urban fabric and interacts with it.

Despite this, physical well-being and the importance of diversified physical exercise for the functional maintenance of the body are often overlooked: there are indoor spaces dedicated to sport, though these are often not associated with key innovations such as outdoor spaces, customizable physical activity, home automation systems for health or activities to promote physical

exercise. From 2020 onwards, we can see a growth in interest in assistive technologies, such as health monitoring devices, intelligent security systems and digital platforms for communication and entertainment. This evolution has also led to a greater diversification of housing options, with solutions ranging from independent residences to intergenerational communities, which encourage exchange and interaction between the elderly and other age groups. Greater importance is also given to green spaces, now understood as fundamental in a project dedicated to elderly users. The conclusions from this phase of study of the state of the art of senior houses were then graphicized in a matrix scheme in which all the three different aspects of well-being were analyzed (Fig. 2).

It was then decided to analyse a series of projects of different architectural typologies in which the main purpose is the improvement of well-being, in order to understand and evaluate the opportunity to integrate these functions and spaces in the senior house typology.

The parameters that most influence the perception of well-being are evaluated: psychological well-being, physical well-being and social inclusion. These parameters will define macro-areas of study of the references and then, through bubble diagrams, organize the functions that are intended to be integrated into the senior house typology.

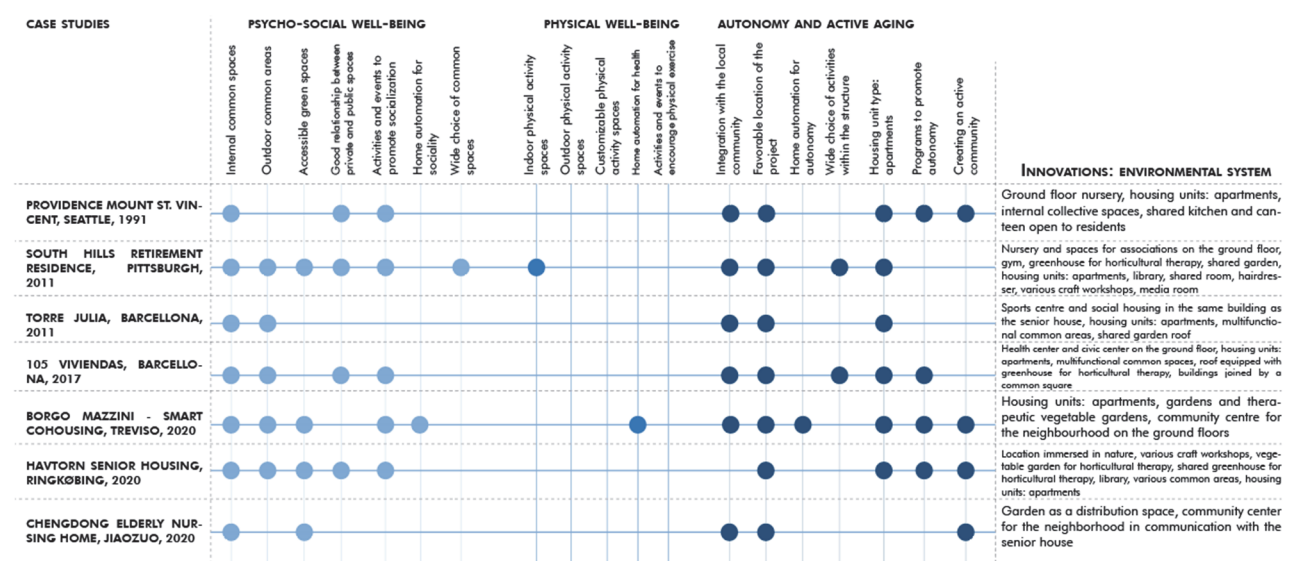


Fig. 2 Conclusions of the study of state-of-the-art senior houses.

Psychological well-being: to promote psychological well-being in senior houses it is important to approach in a holistic way, taking into account the emotional, social and cognitive needs of the users, creating an environment that fosters a sense of belonging, active participation and mutual support.

Physical well-being: physical well-being is never highlighted in senior houses: in the best of cases, spaces for physical activity are not defined based on the specific needs of users and consist of a generic gym area inside the structure.

Social inclusion: in senior houses, the promotion of sociality translates architecturally into spaces and services shared between residents and, more rarely, through the choice of an intergenerational user base or the arrangement of the ground floors as public spaces for the community. Three social levels are therefore created: private, semi-public and public; private spaces correspond to the housing modules, semi-public spaces to the shared spaces between

residents, while the public sphere is the one that connects the users of the senior house with the city community.

In order to combat the symptoms of aging and prevent them from degenerating into diseases or disorders, it is optimal to have areas where it is possible to do diversified physical activity based on the type of user and exercise; physical activity can be proposed as a socialization activity. As for socialization spaces, it is necessary that there is attraction in these spaces that can be internal or external. For example, green areas can be thought of where it is possible to practice sports, to exploit the natural attraction of green spaces. There must also be greater attention to green spaces, considering the effects on health and general well-being due to the direct and indirect relationship with nature. The integration of functionally diversified green spaces within senior communities can in fact allow the exploitation of biophilia, improving the quality of life by promoting mental and physical health (Fig. 3).



Fig. 3 Bubble diagram of functional layout of a typology in which all three aspects of wellness are focused on.

4. Biophilia and Seniors: Sociality and Health through Green Spaces

Biophilia, “love of life”, is a concept located between psychology and biology that highlights the innate emotional and biological connection that exists between humans and nature. Biophilia was first discussed in 1964, when German psychoanalyst Erich Fromm contrasted it with the concept of “love of death”, as an innate human behavior of being fascinated by everything that is alive. Twenty years later, the American biologist Edward Osborne Wilson published the book *Biophilia*, in which he studies his own emotional response to nature and proposes that biophilia is a behavior due to human evolution, which has always occurred in purely non-anthropized spaces; this fascination for all that lives is for Wilson the very essence of humanity. Interaction with nature is therefore a primary need for human beings, instrumental to mental and physical health and therefore to the well-being of the individual.

In 2004, biophilia as a design methodology for the built environment began to be discussed, first as a conference topic and, four years later, in the book *Biophilic Design*, written by Stephen Kellert, Judith Heerwagen, and Martin Mador. In this book, over 70 different patterns for the exploitation of biophilia in built environments are identified. Contributors William Browning and Jennifer Seal-Cramer then describe three types of experiences: Nature in Space, Nature Analogues, and Nature of Space, which include 14 of these patterns. Senior houses, dealing with fragile users, need a type of design that takes these patterns into consideration, promoting the well-being of their residents.

Given the significant and scientifically proven effects on health and well-being due to the direct and indirect relationship with nature [15], it is easy to understand how biophilic design is becoming increasingly interesting for those built environments where there is a need to design with a certain sensitivity in mind and where there is a particular importance in

promoting the well-being of users. Examples of this are healthcare and hospital environments, where the relationship with nature has been proven to reduce hospital stays [16], or, by associating the well-being of the user with an increase in productivity and creativity, in school buildings and work environments. Biophilic design patterns are combinable strategies through which the user experience in a built environment can be actively implemented: more patterns applied in the same project generally tend to increase the health benefits and moreover many patterns tend to be used together for a more significant impact, just as other patterns tend not to increase perceived well-being when used all together.

It is strongly recommended by industry experts to base the influence of patterns on design in relation to the cultural context and the specific user, as well as the objectives that are sought to be achieved by a given environment. Designing a space that uses biophilia to stimulate productivity in an office will use some biophilic patterns, while designing an environment that has an impact on the health of residents of a senior house will use others.

The condition of the modern elderly is often linked to loneliness, isolation and a decline in cognitive functions and mental health. For this type of user, even though we are still talking about self-sufficient elderly people, a design of spaces that stimulates well-being and positive emotional reactions, and the reduction of stress and boredom is needed. For this reason, the biophilic patterns that should be most taken into consideration during the planning of the architectural design of senior houses are the Nature in Space patterns and the pattern of Perspective, patterns that generally tend to work well in overlapping. The integration of functionally diverse green spaces within senior communities can foster the exploitation of biophilia, improving the quality of life, promoting mental and physical health. Designing green spaces for a senior house also means considering a variety of environments that meet the different needs of residents.

The benefits can be obtained “through a passive experience (looking at or being in the garden) and/or through active participation (gardening, rehabilitation therapy and other activities).” [17]. Green spaces can be designed to encourage socialization and to enable community gardening projects or outdoor events, creating a sense of community and belonging in senior houses; the presence of green spaces allows walking, light physical activity and relaxation exercises to improve health; the flora of green spaces helps purify the air, creating a healthier environment.

5. Conclusions

Through this thesis work the main aim was to study a residential model for the elderly that allows users to maintain their self-sufficiency for as long as possible, to increase and maintain psycho-physical well-being through biophilia and to integrate actively into the tourist and cultural fabric of the city.

After studying the state-of-the-art of the typology of senior houses and crossing data with typologies that aim to improve the well-being of people, it was understood that, to innovate the senior house typology, it is essential to rethink the design of living environments with a focus on multifunctional and health-promoting spaces. Senior housings should integrate diversified physical activity areas tailored to different abilities and preferences, encouraging regular movement as a form of both therapy and social interaction. Different activities are needed to create a sense of community and domesticity in the residents, which could be cultural activities or activities for physical well-being, which could be wellness treatments or different kinds of physical activities. In this sense, when thinking of mixed-use architecture, there are many typologies that could be hybridized with senior houses for a mutual aid: for example, these could be museums, given the importance cultural activities have on social inclusion for elderly people and given how the elders, with their experience, could become “bearer of culture” of a specific place.

These spaces should be seamlessly linked with areas for socialization, where natural elements, such as gardens, walking paths, or green courtyards, serve as both visual and experiential attractions. Emphasizing the integration of biophilic design and nature-based features can significantly enhance mental and physical well-being, reduce stress, and foster a stronger sense of community. The new senior housing model must go beyond mere accessibility, aiming to create dynamic, nature-connected environments that support active aging and holistic wellness.

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