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Article

A Multidimensional Framework for Examining the Promise of Housing Cooperatives to Promote Aging in Place

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Abstract

NORC (Naturally Occurring Retirement Community) programs and senior cohousing are two community-based, sustainable initiatives for aging in place associated with cooperative housing in New York and Spain which are spreading rapidly as an alternative to institutionalisation. This paper examines how NORC programs and senior cohousing support aging in place using a conceptual framework derived from theories on active aging and the ecological model of aging, which suggests specific dimensions to characterise the processes through which these initiatives potentially achieve their goal of promoting a healthy, active aging, including aspects of the physical and social environment. Our framework was applied to a selection of case studies from each model, allowing us to conceptualise their strengths and weaknesses as developed in cooperatives in these two contexts. Findings show that NORC programs help older people stay in familiar neighbourhoods and take advantage of economies of scale, but dwellings are not adapted for reduced mobility. Spanish senior cohousing is an affordable and accessible alternative, but existing communities were found to be rather isolated. Future research should consider hybrid models including characteristics of various initiatives best adapted to each context's housing policies and welfare system.

Keywords: housing cooperatives; aging in place; New York; Spain; NORCs; cohousing

1. Introduction

Global population is aging rapidly: in New York, the population over 65 will increase from 15.5% in 2022 to 20.6% in 2040 [1], while in Spain, it will grow from 19.3% in 2020 to 29.4% by 2068 [2]. In addition, older adults in Western countries prefer aging in place [3]: 96% of older New Yorkers are aging in place, with half living alone [4]; while 97% of Spanish older people live at home [5], and almost a third of older women live alone [2], which highlights the need for sustainable living options fostering social inclusion [6].

Several initiatives have been developed globally over the last decades to facilitate aging in place [7,8] as an alternative to institutional care.¹ Among this increasing array of options, we are exploring two innovative models that particularly contribute to community-building among residents: Naturally Occurring Retirement Communities Supportive Service Programs (NORC programs) and senior cohousing.

These two models differ in many ways, but they share a key similarity not found in most aging-in-place initiatives: both are often linked to nonprofit housing cooperatives, with a long tradition in New York, where their homeownership character increases the likelihood of older people aging in place longer than in rentals [9]. However they face more challenges in Spain, whose "ownership

¹ Other models providing community-based services may be Villages in the United States [19]; or in-home support services, senior and day centers in Spain [52].

culture”² was shaped by decades of policies promoting homeownership [10], contrasting with recent legislation favoring rental housing. Housing cooperatives may promote aging in place by fostering the development of a strong community spirit, which reduces social isolation and encourages mutual support, making them the ideal framework for these living options [11]. Additionally, as member-owners, residents have control over management decisions and governance, which also aids in social cohesion.

In New York, where NORCs originated, they are primarily housed in urban high-rise buildings [12], providing affordable housing to low- and moderate-income older adults. In contrast, the Spanish long-term care system has traditionally focused on institutional settings [5,13]. However, a shift toward person-centered care³ and community-based models is observed, reducing social isolation. One emerging initiative in Spain is senior cohousing, where individual homes group around communal spaces, linking the autonomy of private dwellings with the benefits of community living [14]. This study explores the feasibility of Spanish cohousing on the basis of a previously established experience such as NORCs.

Scholars who have researched the health benefits associated with NORCs suggest that certain social and physical factors in a community positively influence older residents’ well-being, facilitating healthy aging [15–17]; therefore, it is crucial to research the key processes through which aging-in-place initiatives benefit older adults. While there is extensive research on social-relational aspects of NORC programs and other models [8,18,19], studies including the physical environment have never been performed.

This paper intends to address this gap by researching how cooperative housing supports sustainable aging in place, examining two models linked to this tenure form in New York and Spain, two contexts with different housing and welfare policies where cooperatives have remarkable characteristics. It aims to perform a systematic analysis of these initiatives to determine the environmental features that promote health aging, with views to identifying the strengths of NORCs that could be exported to Spain, thus improving Spanish communities’ outcomes. It is part of a larger study researching the applicability of New York NORCs in Spain, given both contexts’ similar demographics and prevalence of urban high-rise housing.

1.1. Brief Overview of the NORC Program and Cohousing Models

NORC programs are defined as community-level initiatives linking older adults, building managers, service providers, and other partners within an area where older adults concentrate to coordinate health and social services and group activities on site, thanks to private philanthropic and government funding [19,20]. These areas were not purpose-built as senior housing, yet a significant proportion of older people [21] has developed because residents remain in their homes as they grow older. The first NORC program was launched in 1986 at Penn South, a limited-equity cooperative in Manhattan, by the United Jewish Appeal (UJA) Federation network of geriatric service agencies, and it was initially funded entirely by philanthropy [22]. The UJA-Federation secured housing development funding, and the model expanded over the next decade to other low- and moderate-income communities across New York. While NORCs spread across the U.S. in the 2000s [20], their link to cooperative housing remains unique to New York. UJA also helped promote legislation and secure state funding, including mapping census data to depict concentrations of older people [22].

² In 2018, 76.1% of the Spanish population were homeowners, rising to 89.6% of the population aged 65 and over [2], [13].

³ Person-centered and integral care “fosters the necessary conditions for achieving improvements in all areas of quality of life and the well-being of the person, based on full respect for their dignity and rights, their interests and preferences, and ensuring their effective participation”. It is based, among others, on the active aging paradigm [53, p. 74].

As of October 2025, the New York State Office for the Aging funded 32 NORC programs in New York City [23], while 36 were financed by its Department of Aging [24]. New York State defines a NORC as a housing complex where at least 40% of units include someone over 60, with over 500 older adults [23], enabling efficiencies in service delivery.

Cohousing is commonly referred to in Spain as “collaborative housing” [11]. The first development was built in 1964 in Denmark [25], with other Northern European nations almost simultaneously developing similar concepts. While these pioneering communities were mostly owner-occupied, a version based on the *andel* model of limited-equity cooperatives was introduced in the 1970s [25]. Cohousing communities may be new-build or retrofit [26], and evidence suggests that they contribute to a successful aging [27].

A group of older neighbors in Malaga built the first development in Spain, Residencial Santa Clara, in 2000 [11]. However, cohousing did not gather momentum until the 2008 global financial crisis, when several projects started to emerge in different regions [28]. In October 2025, thirteen communities operated in Spain, nine catering to older people, with more than 60 initiatives under development, about fifteen of which were in the Valencian Community [29].

1.2. Housing Cooperatives in New York and Spain

In 1926, the New York State Limited Dividend Housing Companies Act enabled the first large-scale cooperative workers’ housing projects developed by trade unions and other labor organizations by granting local tax abatements to housing companies that limited profits and selected lower-income tenants [30], marking the birth of limited-equity cooperatives. Under this format, tenant-owners buy shares in the corporation, which owns the property collectively, under a down payment, thereby not owning their individual units to which they are given a use right [10]. Membership also requires the payment of monthly carrying charges to cover the cost of the mortgage and the operation and maintenance of the building. Additionally, shareholders do not get a profit when they resell [31]. The 1926 Law and other programs, such as the 1955 Mitchell-Lama, provided tax abatements for a limited time; once these restrictions expire, members can opt to place their units on the open market, which many housing cooperatives have voted for.

Spain is a highly decentralized state with three government levels: central, regional, and local [32]. Its seventeen regions have exclusive authority over housing, paralleling how U.S. states implement federal housing policies [13]. Valencia is significant for passing Spain’s first collaborative housing law (Law 3/2023 of 13 April).⁴ The law mandates that the ownership of this housing lie with a cooperative, as its community-driven principles enable the social purpose of this type of housing. In this model, the association owns the property, while members buy a share, granting them usage rights, and pay a monthly fee [10]. The Valencian law responds to the State Housing Plan 2022-2025 (Royal Decree 42/2022 of 18 January), which supports senior, intergenerational housing and cohousing, funding up to 50% of investments, controlling rents, and limiting residents’ income, thus targeting these housing options towards lower-income groups.

2. Conceptual Framework and Methods

An integrative conceptual framework of the processes through which aging-in-place initiatives achieve their goal of promoting an active and healthy aging was developed to produce a systematic examination identifying strengths and challenges of NORC programs and senior cohousing in housing cooperatives. Thanks to the evidence provided by a literature review performed for our broader study [33], we based our framework on two interrelated bodies of theory within

⁴ Valencia is the fourth Spanish region with the highest number of people over 65 and the only where public social services for older people are fully financed [52]. Valencia city also doubled in summer 2025 the funding for in-home support services, introducing in-home repair services to ensure the livability of older people’s dwellings [54].

environmental gerontology, which focuses on the relationship between older people and their physical and social surroundings.

First, the World Health Organization (WHO) defined active aging as “the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age” [34, p. 5]. Active aging depends on various determinants, including material conditions and social influences. According to this framework, an age-friendly city incorporates features that enable people to age actively [35]. Additionally, age-friendly cities and communities echo the principles inspiring Sustainable Development Goal (SDG) 11 of the United Nations to make “cities and human settlements inclusive, safe, resilient and sustainable” [36].

The WHO’s guidelines [34] explore eight topics related to urban structures, environments, services, and policies reflecting the determinants of active aging, with the first three focusing on the physical environment: housing, outdoor spaces, and transportation. The features that influence the age-friendliness of housing were then grouped into nine domains. However, the checklist outlined by WHO is theoretical and hence not operational for assessing community livability. In response, several frameworks and questionnaires have been developed [35,37–39]. Luciano et al.’s [35] tool, which adapts WHO’s guidelines to Western housing types based on expert panels and a systematic review, was used in this study to assess the age-friendliness of NORCs’ and cohousing physical environments.

NORC programs and cohousing facilitate aging in place by fostering social inclusion and developing social capital [19], defined as community characteristics that encourage mutually beneficial social interactions [40].⁵ Social capital is significant for older adults, given their greater risk of losing social connections as they age and physical barriers that limit movement outside their community. Additionally, evidence suggests it contributes to better health [26,41].

However, Luciano et al.’s framework overlooks the social aspects crucial to promoting aging in place. Therefore, we incorporate another body of theory, ecological frameworks, which examine how the social and physical environments impact individual behavior [42,43]. The ecological model of aging, developed by Lawton in the 1970s, conceptualizes aging in place as dependent on the interaction between individual competence, environmental demands (environmental press⁶), and their dynamic environments (person-environment fit) [44,45]. Ecological frameworks emphasize that aging-in-place initiatives optimize facilitators and reduce barriers to enhance interaction among persons and environments, thus promoting a healthy and active aging [8].

Guided by the ecological model as posited on Greenfield’s frameworks for examining aging-in-place initiatives [8,18,19], as well as Gilbert and Terrell’s multidimensional framework for analyzing social welfare programs [46], five dimensions along which to characterize the social environment of NORCs programs and cohousing were established: who leads the initiative, what benefits are offered, to whom they are offered, how they are delivered, and how they are financed.

Figure 1 presents a socio-ecological framework highlighting the process through which aging-in-place initiatives potentially achieve their goal of promoting aging in place. The model hypothesizes that these communities’ physical and social environments possess certain features that make them age-friendly, leading to specific outcomes among older adults. The active aging framework posits that age-friendly environments potentially facilitate healthy aging, which in turn contributes to participants’ ability to age in place, given that age-friendly communities support aging in place [33,35,38]. Our ecologically-derived framework addresses the seven topics of age-friendly environments that reflect the social and physical determinants of active aging.

In order to test the applicability of our framework, it was applied to the 23 city-funded⁷ NORC programs in housing cooperatives in New York, and to the nine operating senior cohousing communities in Spain [29], along with the six experiences in different stages of development in

⁵ For example, individuals who lack social ties but live in communities rich in social connections.

⁶ Environmental press suggests that environments place stress on individuals [35].

⁷ This selection was used since it is the most often updated and reliable listing.

Valencia [7,11], all in housing cooperatives (Figure 2). Through an inductive analysis, we conceptualized the features through which these models promote aging in place and identified lessons from the United States that can expand Spanish housing policies for older people.

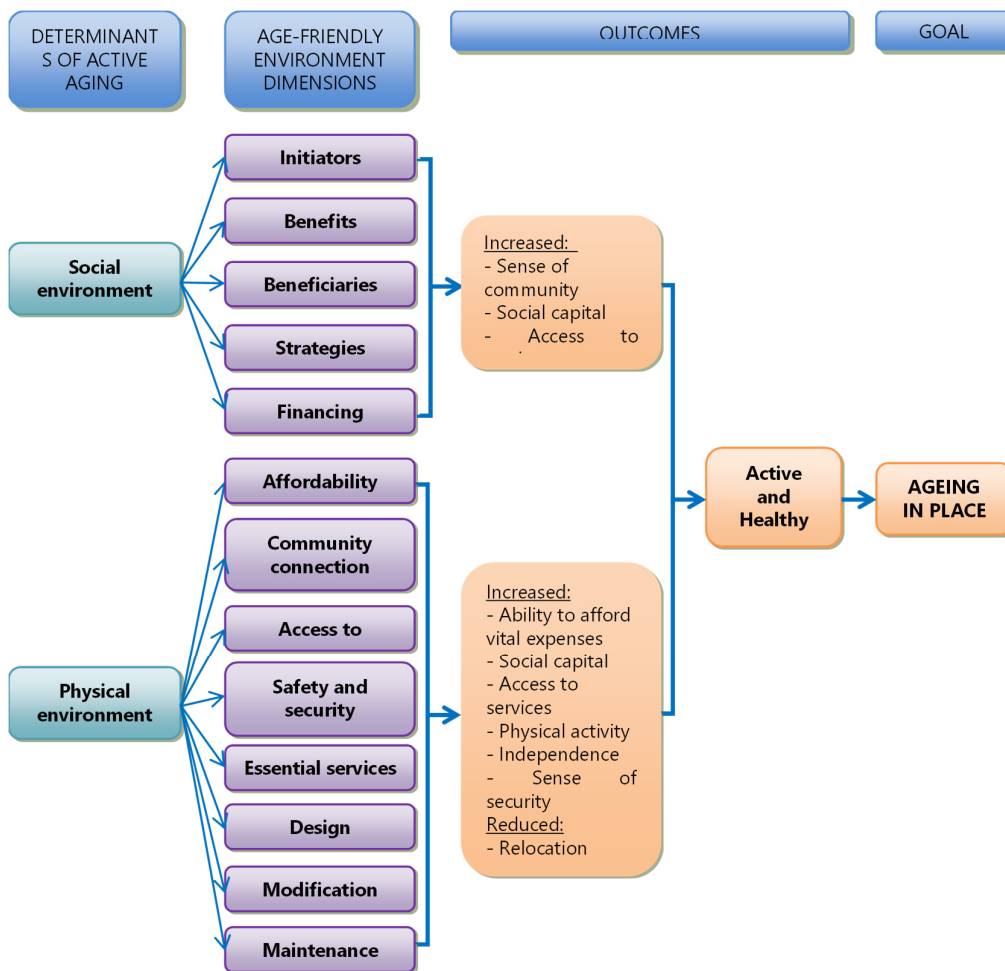


Figure 1. Socio-ecological framework of the process through which NORC programs and cohousing potentially facilitate ageing in place. Source: Adapted from [18], p.276 and [34], p. 5.



Figure 2. Maps showing the location and information of the initiatives in New York City (left) and Spain (right). In blue, NORCs with site surveys. In green, NORCs with site surveys and resident surveys. The geographical dislocation of Spanish senior cohousing can be observed. Source: Authors' elaboration.

Information was gathered from primary and secondary sources. Quantitative data about built environment features such as green areas, access to services, and public transport were retrieved using Geographic Information Systems (GIS). Characteristics including apartment size, layout, accessibility, presence of balconies, and outdoor areas, were extracted from site plans and floor plans of 21 NORCs and eight cohousing developments.

A key source for NORCs was an on-site study of a selection of communities in New York, part of the first author's doctoral dissertation, which involved architectural inspections of 26 sites (13 in cooperative housing developments) and resident surveys at eight sites (five in cooperatives) [17]. On the one hand, site visits were made and a built environment assessment tool was filled in for each development. On the other, a survey instrument was developed by the authors, targeted to residents aged 60 and older, incorporating validated items addressing sociodemographic information, health and well-being, social integration and the built environment on three scales: home, building complex, and neighborhood. Data was then evaluated using descriptive and multivariate regression analyses to determine the factors influencing well-being outcomes.

The remaining data, such as equity values, maintenance charges, provided services, funding sources, or eligibility ages, were collected from community homepages⁸, real estate portals⁹, news¹⁰, and the literature.¹¹ Since the information collected this way could not be contrasted with more reliable sources, we offer a global assessment of each dimension.

3. How Do NORC Programs and Senior Cohousing Promote Healthy Aging?

3.1. Physical Environment

The first dimension of the physical environment characterizing these initiatives is housing affordability, entailing the housing costs, including renting or mortgages, utilities, and maintenance costs [35]. New York City's limited-equity cooperatives were affordable housing until some voted for privatization [31]. While Spanish cohousing experiences were conceived as affordable housing, down payments may be difficult to afford for pensioners [11]. However, new cohousing using State housing plan subsidies will likely have lower investments.

The second dimension of the physical environment would be community connection, which should be facilitated on three levels: outdoor private spaces (such as balconies, patios, or gardens), overlooking communal facilities and green areas, and sharing spaces [35]. In New York City, housing cooperatives are primarily associated with a building type (i.e., "towers in the park"¹²), consisting of high-rise towers on superblocks surrounded by green spaces, which can amount to more than 80%

⁸ For example, http://clearviewgardens.com/wp-content/uploads/2025/03/2025.03.17_Information_for_Pro prospective_Buyers.pdf provides up-to-date information about maintenance charges and selling prices for a NORC community in Queens; or <https://www.edetanova.com/centro-socioasistencial/> lists all the services that the senior centre within a cohousing project near Valencia is going to offer.

⁹ For several New York complexes, portals such as <https://streeteasy.com/> listed latest unit selling prices; while a cohousing community in Valladolid advertised their units on <https://www.idealista.com>.

¹⁰ For example, <https://cadenaser.com/nacional/2025/04/06/esto-no-es-una-residencia-de-mayores-cohousing-senior-una-nueva-forma-de-vivir-en-comunidad-cadena-ser/> informed about eligibility ages, down payments and monthly charges of a cohousing community near Madrid.

¹¹ See the authors referenced in the models' overview, mainly Greenfield (2012); Greenfield et al. (2012, 2013); and Vladeck (2004) for NYC NORCs; and Alguacil Marí et al. (2021); Etxezarreta and Cano (2016); Gummà and Castilla (2017); López and Estrada (2016) for Spanish cohousing.

¹² The idea of "towers in the park" was suggested by Le Corbusier in many of his writings and books, such as *Towards a New Architecture* [55].

of the site area [47]. Spanish cohousing favors low-rise developments in rural towns or suburban areas of bigger cities, surrounded by nature and/or with inner landscaped courtyards. All projects provide communal areas and open spaces offering ample opportunities to socialize.

Access to services is the third factor that influences housing's age-friendliness. Housing should be near certain amenities: health facilities, shops, public transport, parks, places of worship, and general services (e.g., banks) [35]. Most of the researched housing cooperatives in New York City are located in urban neighborhoods with good access to services. Spanish cohousing sites are located in relative proximity to services, which might translate into reduced social interactions with the broader community when a bus ride is required to access external services.

Safety and security is the fourth dimension that characterizes the initiatives' physical environment. Safety refers to minimizing potential risks for falls and other hazards in the home environment, while security implies feeling safe from crime [35]. Housing cooperatives in New York City were not built with older people's needs in mind; hence, according to our survey, many older residents needed to modify their apartments to make things safer, while reporting feeling safe at their buildings and moderately safe in their neighborhoods. In Spain, reviewed projects have been designed following accessibility guidelines, meaning they are safe for older people, with security not being an issue.

The fifth factor to consider when assessing the age-friendliness of housing is access to essential services at home: heating, air conditioning, lighting, and domotic systems. Central heating is usually provided in New York City housing cooperatives [30], meaning that residents cannot control indoor temperatures, which may lead to environmental conditions outside the comfort zone for older people [35]. Cooling is mainly provided by air conditioning units, where room temperature can be controlled individually. Some survey respondents reported having increased lighting and installed emergency alarms. According to their websites, units in cohousing developments may be built with underfloor heating, ducted air conditioning, energy-saving systems, smart lighting, or alarm switches.

The sixth dimension of the physical environment that affects older people's capacity to age in place is housing design through its size, the types of rooms, its layout, and its accessibility [35]. Plans revealed spacious apartments in New York City housing cooperatives [47], with our survey showing an average of 1.91 rooms occupied by one or two people. However, apartments are not adapted for individuals with reduced mobility. Spanish senior cohousing plans showed accessible common areas and dwellings, but more limited apartment space.

The seventh dimension refers to home modifications for accessibility, that is, the ability to adapt home environments to the changing needs of people as they age [35]. Our survey showed that about three-quarters of NORC residents from cooperative housing in New York had made minor adaptations, mostly grab bars or handrails. However, major interventions for accessibility might not be possible, and relocation to adapted housing might be needed [48]. Several respondents over 80 mentioned accessibility challenges in their apartments, such as thresholds and reaching cabinets. Being accessible, no further modifications should be needed in cohousing dwellings.

Regularly maintaining the residential environment is the last dimension determining whether a person can age in place [35]. According to our survey, apartments in New York City housing cooperatives are in perfect condition, with their residents rating them 4.45 on a scale of 1 to 5 (1 indicating "poor" and 5, "excellent"), which is not surprising given their relatively high incomes¹³ that allow them to afford home repairs. However, apartment maintenance in cohousing might be challenging for lower-income members. Table 1 summarizes each initiative's characteristics according to the dimensions described above.

¹³ Our survey showed that 53% of co-op residents earn over \$50,000 yearly, and none under \$20,000.

Table 1. The physical environment of Naturally Occurring Retirement Communities (NORC) programs and senior cohousing along theoretically-derived dimensions.

Dimensions	NORC programs (New York)	Senior cohousing (Spain)
1. Affordability	Equity values \$10,000-200,000 (affordable), monthly charges \$400-1000 (1 bedroom), sometimes additional charges for services (e.g., storage, air conditioning, other appliances)	Equity values 40,000-120,000€, monthly charges 500-1000€, including healthcare and housekeeping services but sometimes not utilities
2. Community connection	Shared communal spaces and a sizeable proportion of units have balconies overlooking green areas	Shared communal spaces and units in most communities have balconies overlooking green areas
3. Access to services	Services onsite or within a few blocks with bus stop or subway on the same block	Services within 1,000 m, communities outside bigger cities have bus stop or subway nearby
4. Safety and security	Modifications for safety might be needed. Communities have security	Designed with safety on mind. Many communities have security
5. Essential services	Central heating and individual air conditioning units, lighting might need to be increased and domotics installed	Sometimes with central heating, air conditioning, smart lighting and alarm switches
6. Design	75-100 m ² (1-2 bedrooms) for 1-2 people, off-the-foyer layouts. Accessible itineraries and common areas but not units	50-70m ² (1-2 bedrooms) for 1-2 people, open plans. Accessible development and units
7. Modification	Full adaptations of units might not be feasible	Units are already accessible
8. Maintenance	Property maintenance covered by monthly charges; units well maintained	Property maintenance covered by monthly charges; unit maintenance might pose an obstacle

3.2. Social Environment

Ecological frameworks orient attention to the interconnection of the different social structures comprising an individual's social environment, such as family members, neighbors, or health and social service providers [8,42]. This association suggested the first dimension to differentiate the social environment of aging-in-place initiatives: which social structures does the initiative emphasize? In NORC programs, the social service provider develops partnerships with residents and community-based organizations [20]. Conversely, Spanish cohousing is a grass-roots initiative led and managed by residents, who form the cooperative, develop the project, and are involved in its design.

The second dimension was the allocated social provisions [46]. Among the benefits offered by aging-in-place initiatives, these models emphasize three categories of activities and services: civic engagement activities, social relationship-building activities, and services to enhance access to resources [18]. Regarding the first category, NORC programs have older adults volunteer at local high schools [18], while, for example, a cohousing community collaborates with an agroecological association [49]. Secondly, NORCs offer social activities providing connection opportunities, such as exercise and cultural classes or health workshops [18], while social relationship-building activities are a core component of the cohousing model [14]. Thirdly, while NORC programs in New York typically provide social and healthcare services, they focus on coordinating and increasing access to existing external services [20]. According to their websites, Spanish cohousing offers more comprehensive services, including housekeeping and personal care.

Aging-in-place initiatives always include some designation of beneficiaries. The third social dimension was the basis of social allocations [46]: eligibility and demographic characteristics of beneficiaries. According to our survey, NORC residents in New York were mostly older than 73, whereas typical ages at Spanish senior cohousing communities were between 60 and 90 [25].

The fourth dimension addressed the organizational arrangements for administering the initiative [46]. Greenfield et al. [19] found that most (58.16%) of NORC services were provided by organizational staff, although sizeable percentages were through referrals to discounted providers (23.88%) and volunteers (32.29%). In cohousing, services are most likely supplied by paid staff, but in some initiatives, volunteer members perform certain activities for the community, such as cooking or maintenance [50].

The fifth and last dimension of socially characterizing the initiatives was related to the sources and types of financing of the social provisions [46]. NORC programs are funded by various governmental and private sources (Vladeck, 2004), while cohousing emphasizes economic self-reliance [10]. Table 2 summarizes the characteristics of NORCs and cohousing according to the dimensions above.

Table 2. The social environment of Naturally Occurring Retirement Communities (NORC) programs and senior cohousing along ecologically-derived dimensions.

Dimensions	NORC programs (New York)	Senior cohousing (Spain)
1. Initiators	Typically led by a social service provider	Led by prospective residents
2. Benefits	Promote civic engagement, build social relationships, enhance access to services	Promote civic engagement, build social relationships, enhance access to services
3. Beneficiaries	60 years and older to be eligible, low and moderate income	Typically accept members 50-70 years old, middle to high income
4. Strategies	Services provided through organizational staff and referrals to discounted providers	Services provided through organizational staff and member volunteers
5. Financing	Largely by the government and private corporations	Largely by membership dues and by renting out spaces and offering services to the broader community

4. Discussion

This study, guided by a multidimensional framework for analyzing the social and physical environment of aging-in-place initiatives, explored benefits and challenges in implementing the NORC program and cohousing models in New York and Spain regarding the features through which they seek to promote aging in place, with the ultimate goal of improving Spanish housing for the elderly. Our framework posits that these models offer supportive physical and social environments that enhance safety, accessibility, community connection, and access to services, while suggesting that they facilitate social interaction and support among older residents and foster their connections with the broader community through activities that build social relationships and encourage volunteerism. Resident involvement in management decisions also builds social capital [26].

Furthermore, evidence suggests that certain physical environment features may increase social capital levels [40]. In “social contact design”, the site plan fosters residents’ community connections and social interaction. Several cohousing initiatives arranged the buildings around a central courtyard that acts as a meeting space connecting the community with the existing urban fabric. Additionally, the green spaces surrounding the interspersed buildings with multiple seating areas in New York cooperatives contribute to social capital [17].

Moreover, NORCs and senior cohousing are sustainable options for aging in place, aligning with targets 11.1, 11.5, 11.6 and 11.7 of the United Nations' SDG 11 [36].¹⁴ First, in NORCs and in senior cohousing, older residents can access adequate, safe, affordable housing and basic services. Second, since 2013, NYCHA has invested billions of dollars from the Sandy Recovery Program to restore the most affected developments, making them more resilient against water-related disasters, with several NORCs among them (Figure 3). Similarly, Spanish cohousing communities reduce their environmental impact by incorporating energy-saving systems [11]. Lastly, NORCs and senior cohousing provide access to safe, inclusive, accessible green and public spaces for older people.



Figure 3. Restoration works as part of Sandy Recovery Program at several public housing developments in NYC.

The main strength of the American NORC program model is that it helps older adults remain in familiar neighborhoods. Another key aspect of NORC programs compared to other community-based initiatives is that they take advantage of economies of scale by providing services in areas with high concentrations of older people [22]. NORC's main shortcoming is that individuals with reduced mobility in New York City may be forced to relocate to environments more suited to their needs, given that apartments' complete adaptation for accessibility might not be technically or economically feasible.

Senior cohousing, reducing costs in several ways, is an affordable alternative for older people compared to private nursing homes, with the average monthly cost exceeding €2,000 [51], and the scarcity of beds in public facilities.¹⁵ Its main advantage is that communities are conceived with older people's needs in mind and adapted to their physical limitations. However, while Spanish

¹⁴ Target 11.1 is "safe and affordable housing"; target 11.5 is to "reduce the adverse effects of natural disasters"; target 11.6 is to "reduce the environmental impact of cities"; and target 11.7 is to "provide access to safe and inclusive green and public spaces".

¹⁵ The only source of income for 70% of Spanish retirees is their pension [11], with the average Spanish pension being 1,441.5 € [56].

communities choose strategic locations close to local services, they are relatively isolated [29], implying abandoning the environments where older people have spent most of their lives, severing ties.

5. Conclusions

In light of the results, there are a number of lessons that the incipient Spanish cohousing can learn from an already consolidated model which is also linked to nonprofit housing cooperatives, such as NORCs in New York, to improve their sustainability, functionality, and ability to support healthy aging.

Senior cohousing's main drawback in Spain is suburban and rural developments' lack of connection to the broader community. To enhance community integration, they could offer their wide array of facilities and care services to non-resident neighbors, which would also translate into reduced fees for members and savings for the external users compared to hiring those services individually or moving to assisted living facilities. Additionally, communities could work with municipalities to improve public transport and walkability near the sites. Cohousing may also learn from NORCs' formalized social service coordination. While cohousing is community-driven, communities could hire social workers or geriatric care managers to act as coordinators that help older adults navigate formal service systems (e.g., health care, transportation, benefits), especially as they age or become frail.

NORC programs in New York and the United States owe much of their success to philanthropy and the UJA-Federation [22], which suggests Spain could learn from citizen engagement in the United States and the nonprofit sector's role in securing government support and funding for these residential alternatives.¹⁶ More diverse and external funding sources would also increase financial sustainability and reduce economic exclusion of lower-income members in Spanish cohousing communities. The Valencian law on collaborative housing is a step forward, with other regions likely to follow, while state housing plans promote affordable, accessible housing with services for older people. Only time will tell if these living options take hold and the Spanish population can age healthily in their long-time communities and maintain independence, autonomy, and social connections.

Apart from a nation of homeowners, Spain is a dense, urban country with a predominance of multifamily houses.¹⁷ Demographic studies like the UJA-Federation's in neighborhoods of the largest Spanish cities would help to identify critical masses of older people to achieve efficiencies in service delivery in the community. Thus, it will be possible to promote affordable, universally designed cooperative housing in the communities where older people reside and to provide them with the required services to age in place healthily.

It is also crucial for future research to consider hybrid models combining characteristics from various initiatives based on each context's housing policies and social welfare system (e.g., relying heavily on membership fees, such as Villages, but housed in existing multifamily housing where older people concentrate, such as NORCs). Lastly, NORCs deliver their services through a mix of professional staff and trained volunteers; therefore, hybrid service delivery in senior cohousing may help ensure continuity of care and foster participation among older residents, who could rotate through community roles.

Lessons from New York's experience may also be transferred to other European countries with similar demographics and housing types and a cooperative tradition, such as Denmark, Netherlands, or the UK. Finally, our framework can help compare other aging-in-place initiatives, advancing

¹⁶ Villages receive a significant percentage of their budgets from fundraising, charitable donations, private foundations, and nonprofit organizations [19].

¹⁷ In 2020, over 80% of the population lived in urban areas, with 25% living in the six biggest cities [57], and about 70% of dwellings in apartment buildings [58].

integrative theory development, which is essential to avoid confusion and fragmentation among policymakers and participants. Cross-national studies comparing initiatives would enhance efforts to optimize strengths and limitations in developing models fostering aging in place best adapted to each context's uniqueness.

Our analysis revealed the benefits and challenges of each model and explored similarities and differences in their implementation in New York and Spain. However, a number of limitations regarding data collection did not allow for a systematic comparison. First, information gathered from websites is unreliable since last updates are sometimes unclear, too old, or data are misleading. Additional data sources should be employed to triangulate the validity of the information. Second, empirical research comprising site visits, resident surveys, and organizational surveys in Spanish cohousing communities, such as García Sánchez et al. (2005), and Greenfield et al. (2013), is needed to produce a more even comparison. However, it was not the focus of this study due to time limitations. Additionally, our framework highlights certain dimensions that might not reflect all relevant aspects of the models (e.g., their effectiveness). Future studies are expected to suggest modifications to this theoretical framework, which will advance research that best informs theory, policy and practice on these and other initiatives.

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