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Posted Date: 23 May 2025

doi: [10.20944/preprints202505.1799.v1](https://doi.org/10.20944/preprints202505.1799.v1)

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Article

# Cultivating Well-Being: An Exploratory Analysis of the Integral Benefits of Urban Gardens in the Promotion of Active Aging

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**Abstract:** The ageing population is a global phenomenon that has increased multimorbidity, disability and frailty in people over the age of 60, posing ever greater challenges for public health systems. In this context, this study analyses the role of urban gardens as platforms that promote active ageing and contribute to the physical, psychological and social well-being of this group at risk of exclusion and vulnerability. Focusing on the city of Valencia, one of the Spanish regions with the highest proportion of people over 60, the research adopts a qualitative approach based on in-depth semi-structured interviews with 15 older adults who regularly participate in urban gardens. The results show that these gardens promote active ageing by offering opportunities for regular physical activity, emotional relief, social interaction and nutritional improvement through food grown by the participants themselves, as well as greater autonomy, improved mood, mental stimulation and a renewed sense of purpose after retirement. The gardens also function as inclusive spaces that foster intergenerational relationships and strengthen community ties. Urban gardens act as multifunctional infrastructures that should be integrated into urban planning because of their potential to improve the quality of life of older people and address the challenges of population ageing.

**Keywords:** urban gardens; older people; active ageing; holistic wellbeing

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## 1. Introduction

Population ageing is one of the most significant demographic changes worldwide [1,2]. This phenomenon, which has become particularly relevant in recent decades, is closely linked to increased life expectancy, sustained declines in fertility rates and certain migration patterns, especially in countries with high numbers of retired people [3,4]. As a result, population ageing has led to an increase in multimorbidity, disability and frailty among people over the age of 60, posing growing challenges for public health systems and social services [5,6]. It is estimated that baby boomers will account for approximately 25% of the elderly population by 2030, which translates into an increase in mortality rates and the prevalence of chronic, musculoskeletal, lumbar and tumour diseases [7, 8].

According to recent Eurostat (2020), demographic projections for the EU-27 show accelerated growth in the oldest age group. Between 2024 and 2100, the proportion of people aged 80 or over is expected to increase 2.5 times (from 6.1% to 15.3%) and the proportion of people aged 65 or over is expected to increase (from 21.6% to 32.5%) [9]. Between 2019 and 2050, the number of people aged 85 and over is estimated to increase by 113.9%, from 12.5 million to 26.8 million, while the number of centenarians will reach 484,000 [10]. At the same time, it is projected that by 2050, more than 90% of European regions will have at least a quarter of their population aged 65 or over [11]. These projections reflect a profound demographic transformation that will have direct implications for healthcare systems, public policies and economic sustainability [12].

This demographic phenomenon is also reflected in health indicators. In 2023, life expectancy at age 65 increased in the EU by 0.7 years compared to 2022, with Spain recording the highest value (22.0 years) and Hungary the lowest (16.8 years) [4]. However, this longevity does not always translate into quality of life. In 2018, 68.5% of the adult population (aged 16 and over) in the EU-27 perceived their health as good or very good. This percentage falls to 47.8% among people aged 65 to 74, to 32.3% among those aged 75 to 84, and to 20.6% among those aged 85 and over [9]. At the same time, functional limitations also increase with age: in 2014, around 10.5% of adults aged 65 to 74 experienced limitations in walking, while 32.3% of those aged 75 and over reported severe difficulties [11]. This functional decline is linked, among other things, to a higher prevalence of depressive symptoms in older people, which affected 13.1% of those aged 75 and over, compared with 6.5% in the 65-74 age group [9]. In Spain, life expectancy at birth in 2022 stood at 83.2 years – the highest in the EU – attributed to factors such as the Mediterranean diet, universal access to healthcare and efficient primary care [13]. Overall, this health, functional and emotional landscape highlights the need to develop strategies for active ageing, prevention of dependency and promotion of personal autonomy.

Old age is also the stage of life that is most subject to stereotypes, a phenomenon known as ageism, which is specifically defined as the set of prejudices, stereotypes and latent discrimination in different political, social and healthcare institutions associated with age and directed at the older population [14,15,16]. Ageism is the third leading cause of discrimination in the world, preceded by racism and sexism, linking old age with a profile of sick, dependent, unproductive, intransigent and fragile older people [17,18].

To address the consequences of global demographic change associated with population ageing and the health, functionality and well-being issues linked to this transition, it is essential to implement strategies, policies and programmes that promote a positive view of ageing. This transformation involves leaving behind the traditional social stigmas surrounding old age, prevalent in many developed societies, and moving towards a paradigm focused on promoting active ageing [19,20]. The concept of active ageing was defined by the World Health Organisation in 1994 as the process of optimising opportunities for physical and mental health, social participation and security, with the aim of improving quality of life as people age. This definition recognises the human rights of older people and incorporates the United Nations principles of independence, participation, dignity, care and self-fulfilment [21,22]. More recently, initiatives such as the WHO Decade of Healthy Ageing 2021–2030 have reinforced the need to create environments that promote the well-being of older people through integrated actions in public health, urban planning and community participation [23]. The Age-Friendly Cities and Communities (AFCC) initiative, promoted by the WHO in 2007, has been implemented by multiple cities around the world to adapt their urban environments to the needs of an ageing population [24]. In cities such as Barcelona, action plans have been promoted that integrate citizen participation, safe mobility and inclusive spaces [25]. At the international level, cities such as Manchester and New York have implemented innovative strategies focused on accessibility, adequate housing and intergenerational cohesion [26]. These experiences reflect a common approach to active ageing based on health, inclusion and the urban environment as key determinants of well-being [27]. The aim of these projects is to transform urban environments into spaces that respond to the needs of an ageing population through inclusive infrastructure, services and policies that enable people to age safely, healthily and participatively [28,29].

These environments, known as “age-friendly cities”, cover eight areas of intervention: outdoor spaces and buildings, transport, housing, social participation, respect and inclusion, employment, communication and information, and community and health services [24]. The creation of these spaces not only meets accessibility criteria but also responds to the need to build cohesive communities that guarantee the physical, psychological and social well-being of older people at different stages of their lives.

The evidence on the role of urban nature in supporting the well-being of older adults has grown substantially in recent years. A comprehensive review by Xu, Nordin, and Aini (2022) provides a valuable foundation for this discussion by identifying three key dimensions—spatial, ecological, and

infrastructural—through which these spaces exert their influence [30]. Spatial attributes such as accessibility and proximity facilitate physical activity and reduce barriers to use, while ecological characteristics including biodiversity and vegetation richness promote restorative experiences and emotional attachment to place. Infrastructural elements like benches, lighting, and toilets further enhance usability, particularly for individuals with mobility constraints.

Within this broader category of urban nature, urban gardens and community allotments emerge as particularly effective settings for generating health-related benefits among older populations. Physical health is one of the most consistently documented domains of improvement. Participation in gardening contributes to enhanced mobility, cardiovascular endurance, and muscular strength [31], with tasks such as planting and watering offering moderate-intensity physical activity appropriate for the capacities of older adults [32,33]. These activities have been linked to reduced risks of chronic illness, improved blood pressure regulation, and fewer general practitioner consultations [31,34]. Although gardening is not always associated with lower body mass index, it tends to encourage physical movement in a way that is enjoyable and therefore more sustainable than other forms of exercise [35].

Beyond physical health, gardening has been repeatedly associated with psychological well-being. The literature identifies a range of mechanisms through which gardening may alleviate stress and enhance mood. Exposure to natural settings has been shown to reduce salivary cortisol levels and support emotional regulation [36,34]. Moreover, gardening often enables participants to engage in focused, purposeful tasks that foster distraction from daily concerns—an effect explained by Attention Restoration Theory [35,37]. Many older gardeners describe feelings of pride and satisfaction derived from watching plants grow, which reinforces a sense of purpose and emotional resilience, particularly during life transitions such as retirement or bereavement [35,33]. Cognitive improvements have also been reported, including enhanced memory, attention, and even visual function, especially when garden tasks incorporate elements of sensory and autobiographical memory [36,31].

Social benefits represent another key dimension. Urban gardens often serve as informal meeting places where older adults can interact with peers, share knowledge, and build supportive networks [38,39]. These social interactions are not always the primary motivation for participation, yet they consistently emerge as important outcomes, particularly in combating loneliness and fostering community cohesion [33,40]. Opportunities for intergenerational engagement, as well as strengthened ties with neighbours and spouses, have also been reported, contributing to an increased sense of belonging and social utility [40,41]. In institutional settings such as assisted living facilities, community gardens have been shown to promote neighbourhood attachment and increased participation in communal events, which are particularly valuable for individuals at risk of social isolation [38].

In addition to these primary domains, other less frequently discussed but meaningful benefits include enhanced environmental awareness and prosocial behaviour. Gardening has been linked to stronger emotional connections to nature and increased intentions to engage in environmentally responsible practices [37]. Moreover, the sense of altruism and global solidarity fostered by participation in community gardens—especially when linked to charitable initiatives—offers older adults an avenue for moral engagement and contribution to collective well-being [40]. In rural and ageing territories, such as South Tyrol, gardens have also been instrumental in promoting social integration and counteracting the demographic effects of depopulation [42].

Taken together, the literature reviewed highlights the capacity of urban gardens to generate layered and interdependent health benefits for older adults. The consistency of findings across geographical contexts and methodological approaches reinforces the potential of urban gardens to serve as low-cost, scalable interventions for promoting active and healthy ageing in urban settings. Equally, these studies stress the importance of inclusive design, appropriate infrastructure, and social facilitation in maximising their benefits.

The choice of Valencia as the setting for this research is based both on its demographic structure and on the institutional and urban framework that makes it an ideal environment for exploring active ageing through urban agriculture. In recent years, the city has shown a marked trend towards population ageing. According to data from the Economic and Social Council of the Valencian Community [43], in 2021, 19.4% of the Valencian population was aged 65 or over. The Valencian Community is among the Spanish regions with the highest percentage of elderly people. According to data from the National Institute of Statistics [44], in 2024, 20.19% of the population of the Valencian Community was aged 65 or over, placing it above the national average. Added to this is a high prevalence of loneliness in old age: in 2020, there were 4,849,900 people living alone, of whom 2,131,400 (43.6%) were aged 65 or over [43]. These figures highlight the urgent need to implement innovative strategies that promote health, social inclusion and quality of life for this group, with urban gardens emerging as multifunctional infrastructures that provide social, economic and ecological benefits [45,46]. Likewise, regional legislation—such as Law 5/2018 on the Huerta de València—has represented an important step forward in the protection and revitalisation of these spaces, recognising their territorial, environmental and social value. However, its recent amendment through Decree Law 4/2025, which includes the abolition of the Consell de l'Horta, poses a significant risk to the participatory governance of this agricultural heritage. This measure, justified on grounds of administrative simplification and cost savings, may weaken intersectoral coordination and social representation in decision-making on the future of the Valencian Huerta [47]. At a time when integrated and participatory policies are needed to respond to population ageing, this institutional setback further highlights the need to generate empirical knowledge on the potential of urban gardens as tools for public health, inclusive planning and social cohesion in contexts of territorial and demographic vulnerability.

In this context, this study aims to explore in depth the practice of urban agriculture in the city of Valencia as a strategy for promoting active ageing, focusing on the benefits perceived by older people through the analysis of various key factors: behavioural, personal, social, health and physical environment. Within the framework of the European Project U-GARDEN - Promoting capacity building and knowledge for the extension of urban gardens in European cities -, this research qualitatively explores how participation in urban gardens contributes to the overall well-being of people aged 60 and over. To this end, a qualitative methodology based on in-depth semi-structured interviews has been chosen in order to collect personal and subjective testimonies that allow us to understand, from lived experience, the real impact of these practices on the daily lives of older people. This approach is particularly relevant in the current context of rapid demographic ageing, in which it is becoming a priority to generate empirical knowledge about the value of green spaces, such as urban gardens, in improving the well-being of older people. The evidence obtained can contribute significantly to the design of inclusive and sustainable public policies aimed at building more friendly, healthy urban environments that are adapted to the needs of an ageing population.

## 2. Materials and Methods

### 2.1. Study Design

The study employed a qualitative cross-sectional design, in which semi-structured in-depth interviews were conducted as an instrument capable of obtaining verbal responses to the questions posed about the research problem [48]. We adopted an epistemological approach based on realism, a theoretical position that holds that language directly reflects experience [49]. We consider this approach to be the most appropriate, given that our interest was focused on the individual experiences of the participants and we started from the premise that they can express their realities effectively.

## 2.2. Spatial Context

The study was conducted in the territorial context of the Functional Urban Area (AUF) of Valencia, whose functional centre—the city of Valencia—is located on the east coast of Spain. It is the third most populated city after Madrid and Barcelona, with a total of 830,606 inhabitants [50]. According to the INE (2022), 28.1% of the total population is over 60 years old [51]. Given the progressive increase in the elderly population in the city of Valencia, together with growing urbanisation, it is considered particularly appropriate for research to investigate the impact of urban green spaces on the well-being of this population group. The study focused on the active participation of older people in urban gardens located within the La Torre Urban Park, known as Sociopolis, as well as in the municipalities of Meliana in l'Horta Nord, Alaquàs in l'Horta Sud, the Espai Verd located in the Benicalap district and the urban gardens of Catarroja located in the l'Horta Sud region.

## 2.3. Participants and Procedure

The aim of the sample recruitment was to interview older people who were involved in daily or weekly activities in an urban garden. A sample of 15 adults aged 60 or over who used a plot in the urban gardens in the areas described above was recruited. To recruit participants, the researchers contacted the representatives of the urban gardens by email, providing them with all the information about the purpose of the study and requesting permission to visit the urban gardens to interview the older adults. Anyone aged 60 or over, resident in the municipalities of Valencia, who was a user of one of the urban garden plots and had a routine activity in the garden was considered eligible to participate in the study. Subjects who had difficulty verbally expressing their opinions/experiences as a result of cognitive impairment were not considered for participation in the study. Specifically, the inclusion criteria for participants were as follows: people aged 60 or over (both men and women), plot located in one of the municipalities within the Functional Urban Area (AUF) of Valencia; daily or weekly participation in the urban garden plot for at least 6 months; absence of cognitive impairment to answer the interview questions independently.

Participants who were willing to be interviewed at the time were given a brief verbal presentation of the study's objective and the interview and were provided with more extensive written information. Participants who confirmed their interest in participating in the study but did not have time to be interviewed at that time voluntarily provided their contact details and received all the study information in writing for their perusal. In the latter case, the researchers contacted them to arrange an interview according to the informant's availability. All informants signed the informed consent form for participation in the interview and subsequent use of the data. For all participants, regardless of whether the interview was conducted in person or online, the interview was audio-recorded using a recorder and transcribed verbatim. Demographic data were collected to characterise the sample and included: gender, educational level, and professional profile. Table 1 shows details on the sociodemographic information of the sample.

**Table 1.** Characteristics of the sample (n = 15).

Nº	Garden Name	Gender	Educational Level	Professional Profile
I1	Espai verd	Female	Higher education	Dental sector product sales representative
I2	Meliana	Male	Primary education	Car spare parts trade
I3	Sociópolis	Male	Secondary education	Telephone sector
I4	Sociópolis	Male	Secondary education	Telephone sector and forestry warden
I5	Sociópolis	Male	Primary education	Beer brewer
I6	Sociópolis	Male	Primary education	Taxi driver and janitor
I7	Sociópolis	Male	Secondary education	Commercial
I8	Sociópolis	Male	Higher education	Administrative assistant in a car dealership
I9	Alacuás	Male	Primary education	Cattle breeder and truck driver

<b>I10</b>	Alacuás	Male	Primary education	Bricklayer
<b>I11</b>	Alacuás	Male	Primary education	Taxi driver
<b>I12</b>	Alacuás	Male	Higher education	Primary school teacher
<b>I13</b>	Alacuás	Male	Primary education	Bricklayer
<b>I14</b>	Catarroja	Female	Higher education	Nursing assistant
<b>I15</b>	Catarroja	Male	Primary education	Bricklayer

Regarding the location of the gardens where the interviews were conducted, five respondents were from gardens in Alaquàs, two from the green space in Benicalap, one from Meliana, and six from Sociopolis, located inside the Urban Park in the La Torre neighbourhood.

The age of the participants ranged from 60 to 90 years old. The 15 participants had different educational levels and professional backgrounds. The interviews continued until data saturation was reached, i.e., the topics developed from the script began to be repeated when the exercise was carried out with other people, validating that the interviews conducted were sufficient to support the research findings, insofar as the participants did not provide new information on the concept of urban gardens as spaces that promote active ageing [52,53].

#### 2.4. Guide to Interview Topics

Given that the objective was to assess the impact of urban gardens on promoting active ageing, the different determinants that make up this concept were taken as a basis, including behavioural, personal, social, physical health and mental health determinants. An interview script with semi-structured questions was developed to ensure a level of order and consistency throughout the interview process. The researchers were flexible in the order in which they asked the questions to ensure the fluidity of the discussion. As for the set of questions, following Mannan and Afri (2020) and Adams (2015) [54,55], various questions were initially used with the aim of breaking the ice and establishing a relationship and a desired level of trust with the respondent. Thus, the interviews began with an opening in which the interviewee was invited to talk to the researcher about themselves, how long they had been participating in urban gardens, why they had started participating in urban gardens, their experience, etc. Some examples of the questions the researchers asked at the beginning of the interview were: Have you worked in the fields before or do you have family who have? What do you do now and what did you do before? How important is it for you to participate in a garden? What benefits have you gained from participating in the garden? Subsequently, the researchers introduced questions related to the determinants of active ageing. Questions were asked about physical activity, diet, psychological well-being, social support, purpose in life, retirement, peer and intergenerational learning, and the physical environment.

#### 2.5. Data Collection, Measures, and Ethical Issues

During the period between January and June 2024, three researchers conducted in-depth semi-structured interviews, both in person ( $n = 14$ ) and by telephone ( $n = 1$ ), with the aim of exploring the experiences of people over the age of 60 in relation to their participation in urban gardens and the capacity of these spaces as platforms for promoting active ageing.

The interview script used consisted mainly of exploratory questions and was designed based on a thematic outline that divided the content into analytical categories and subcategories, thus allowing for better organisation of the discourse and facilitating its subsequent analysis.

Once the interviews were conducted, the transcripts were subjected to a qualitative thematic analysis, focusing on the identification of recurring and significant patterns within the participants' accounts. The Atlas.ti tool was used for data processing, which allowed the information to be organised, coded and interpreted in a systematic and rigorous manner. This software is particularly useful in qualitative studies due to its ability to handle large volumes of textual data, link segments of information through conceptual networks, and facilitate the visualisation of connections between

emerging categories, all of which promotes a more in-depth and structured interpretation of the experiences collected [56].

Finally, the confidentiality and anonymity of the participants were guaranteed, in compliance with the ethical guidelines established by the General Data Protection Regulation (GDPR) No. 679/2016 of the European Union, ensuring that all personal information was treated securely and responsibly.

### 3. Results

The results of this study are organised into six broad analytical categories, corresponding to the sections explored in the interview script, which provide an understanding of how participation in urban gardens influences the promotion of active ageing in the city of Valencia. Firstly, behavioural factors related to physical activity and healthy eating are addressed. Secondly, personal factors linked to psychological well-being are explored. Thirdly, social factors are analysed, including education and social support. Fourthly, health and social services factors are examined in greater depth, with a particular focus on health promotion and the prevention of physical and mental illness and long-term care. Fifthly, the factor of retirement-focused life purpose is considered. Finally, factors related to the physical environment are examined, including clean air and healthy food. These categories highlight the multifaceted value of urban gardens as platforms capable of generating comprehensive well-being in old age by promoting active ageing (see Table 2).

**Table 2.** Analytical dimensions, emerging categories and key findings.

Dimension	Main Category	Key Results
	Physical activity	<ul style="list-style-type: none"> <li>-Positive perception of physical condition linked to active and continuous participation in the urban garden.</li> <li>-Reduction in sedentary lifestyles during retirement.</li> <li>-Adapted and accessible physical activity.</li> <li>-Stimulation of joint mobility, combating stiffness and improving muscle tone.</li> <li>-Preference for traditional gardens as a setting for physical activity (high sense of biophilia).</li> </ul>
Behavioural factors	Healthy eating	<ul style="list-style-type: none"> <li>-Improved dietary patterns.</li> <li>-Transformation of food preferences.</li> <li>-Regular consumption of home-grown food.</li> <li>-Superior quality of food compared to that sold in supermarkets.</li> <li>-Greater confidence in the food consumed due to knowledge of its origin and cultivation process.</li> <li>-Evoicing of childhood memories after consuming home-grown products.</li> <li>-Greater satisfaction when eating.</li> <li>-Concern for local consumption.</li> <li>-Food self-sufficiency in vegetables.</li> </ul>
Personal factors	Psychological well-being	<ul style="list-style-type: none"> <li>-Routine activity.</li> <li>-Emotional support space (promoting resilience, autonomy and psychological balance)</li> <li>-Personal and emotional satisfaction from growing food.</li> <li>-Strengthening social ties with people in the garden, replacing the social void left by retirement.</li> </ul>
Social factors	Education	<ul style="list-style-type: none"> <li>-Acquisition of knowledge through cultivation practices.</li> <li>-Transmission of family knowledge (respect for traditional knowledge)</li> </ul>

		<ul style="list-style-type: none"> <li>-Intergenerational learning (two-way teaching-learning process)</li> <li>-Collaborative learning among users.</li> <li>-Opportunity to share agricultural knowledge and gain personal recognition.</li> <li>-Support for new gardeners</li> <li>-Daily exchange of knowledge among peers.</li> </ul>
	Social support	<ul style="list-style-type: none"> <li>-Principal espacio de encuentro y convivencia</li> <li>-Construcción de vínculos significativos entre los usuarios.</li> <li>-Reducción de la soledad no deseada.</li> <li>-Construcción de redes de apoyo mutuo.</li> <li>-Desarrollo de valores: empatía y solidaridad.</li> </ul>
Health factors and social services	Health promotion and prevention of physical and mental illness	<ul style="list-style-type: none"> <li>-Regular physical activity.</li> <li>-Practical alternative to a sedentary lifestyle.</li> <li>-Increased daily vitality.</li> <li>-Improved mood, appetite and sleep quality.</li> <li>-Gardening as a valuable alternative to limited space or a replacement for more rigid or unhealthy leisure and free time activities (gyms, bars).</li> <li>-Multicultural environment (promoting cultural exchange, reducing prejudice and stereotypes, and fostering social cohesion and the inclusion of at-risk groups).</li> <li>-An environment for disconnecting, finding peace and concentration (performing consecutive tasks: planting, sowing, watering, cultivating, weeding, pruning, harvesting).</li> </ul>
Purpose in life	Long-term care	<ul style="list-style-type: none"> <li>-Reduced risk of dependency or disability (promotion of physical activity).</li> <li>-Therapeutic value with improved mood.</li> <li>-Promotion of mental stimulation.</li> </ul>
	Retirement	<ul style="list-style-type: none"> <li>-New purpose in life after retirement.</li> <li>-Urban gardening as a tool for continuing physical and social activity.</li> <li>-Strategy for spending time in a meaningful and active way.</li> </ul>
Physical environmental factors	Clean air	<ul style="list-style-type: none"> <li>-Ambivalent perception of air quality.</li> <li>-Context of widespread pollution (urban garden)</li> <li>-Space for calm, relaxation and personal satisfaction, contrasting with the stress, pollution and 'commotion' associated with the city.</li> </ul>
	Healthy food	<ul style="list-style-type: none"> <li>-Pleasant eating experience</li> <li>-Healthy and satisfying source of nutrition</li> <li>-Trust in the production process (assessment of taste, freshness, smell and safety of the produce)</li> <li>-Distrust of industrialised or organic products sold in supermarkets.</li> </ul>

### 3.1. Behavioural Factors

The first area of analysis focused on behavioural factors related to health, addressing key aspects such as physical activity and eating habits. This section explored how participation in urban gardens influences the lifestyle of older people, promoting healthier daily practices.

### 3.1.1. Physical Activity

The testimonies collected show that most of the older people interviewed say they feel physically well or relatively well, despite the presence of certain age-related ailments. This positive perception of physical condition is often linked to their active and continuous participation in the urban garden. Even those who acknowledge feeling physically impaired find in the garden a way to counteract the sedentary lifestyle associated with retirement.

I3: “[When asked how they feel] Fine, very well, that’s the important thing about being in a garden.”

I9: “I’m not 18 yet, but I’m fine. Being in urban gardens, apart from creating a symbiosis with nature, you interact with your colleagues and socialise a lot. Very good.”

I10: “At the moment, physically I’m not doing well, but I relax here in the countryside, because at home there’s nothing to do and now I’m retired.”

Although some participants have relevant medical conditions, such as heart problems or high blood pressure, these do not seem to completely limit their ability to remain active, reflecting a resilient perception of physical health.

I4: “Well, exhausted, but fine. I’m waiting for two operations, but I don’t want to have surgery [...] One on my aorta and the other for a hernia...”

I7: “I feel perfectly fine. Apart from some heart problems and high blood pressure... but I’m fine.”

I13: “Lately I’ve been very worn out. My spine hurts a little and my legs hurt a lot. But I’m fine, I can cope and I’m getting myself motivated to come here [referring to the garden].”

In general terms, **urban gardens offer** a form of **adapted and accessible physical activity** that allows older people to keep moving without the rigidity and demands of conventional sports environments. **Tasks related to cultivation** — such as walking between plots, digging, watering, pruning or sowing — are carried out independently and flexibly and are included in the **daily routines of the interviewees**, which promotes adherence and well-being, encouraging horticultural activities to contribute not only to physical maintenance but also to reinforcing the perception of autonomy and personal usefulness.

I3: “Basically, I spend my days gardening and walking.”

I4: “Gardening, drinking beer, eating sandwiches...”

I5: “Yes, it’s more of a contemplative life than anything else. I also have a garden, but with trees. And then I also have animals and that keeps me entertained. I mean, more in the countryside than in the city, but let’s say both things go together.”

I6: “...I have two vices, gardening and fishing.”

I8: “I really like walking, hiking... and this activity [referring to being in the garden], this is the best thing there is.”

I9: “Walking in the mornings, for example, taking my dog for a walk, I have a dog called Boira, and then when we get home I come to the urban gardens, because there’s always something to do there and I prefer to come every day.”

I12: “I go swimming at the weekends. The rest of the week I take my youngest grandson to school and then to the garden. [...] I come here [to the garden] almost every day and now I’ve been pruning...”

I13: “My routine is the garden, I don’t have anything else to do, I plant a little, I keep myself busy with a few things, I go home, watch TV, and in the afternoon I come back here, walk around a bit, talk to people, and have a good time...”

For the older people interviewed, working in the urban garden is an essential source of exercise and physical well-being, combating the **sedentary lifestyle** associated with **retirement** and maintaining an **active daily routine**. The interviewees highlight how this practice stimulates **joint mobility, improves muscle tone and combats stiffness**. At the same time, they point out the positive

impact it has on **mood and mental health**, by offering meaningful occupation, direct contact with nature and the opportunity to spend time with other people, promoting an active and satisfying lifestyle that reinforces both autonomy and self-esteem in old age.

I1: "Well, in the garden, I see that, for example, people who really like it and know how to do it can plant their own vegetables. Take the garden here, for example. This garden is run by [names someone] who is retired and knows a lot, so he takes good care of it and every morning he gets up and has something to do, which is to go down to his garden to see how the things he has planted are doing [...] What do grandparents who have nothing to do do? They stay at home, have their coffee and then what? [...] So this gives them a lot of life."

I2: "Physically, it helps me not to hunch over, it loosens up my joints, it makes me feel good in my head [...] and of course, I grow broccoli, leeks, strawberries, which I have now, so I eat quite well."

I3: "Being here is a pleasure. There are days when you don't feel like doing anything, but others, like today, when you say to yourself, "I need to do some exercise," and you do it. So I think it's perfect for people, especially at a certain age. For retirees, I think an urban garden is ideal."

I4: "...well, I'm more active here [...] And well, I'm comfortable, I'm happy and I like coming here instead of hanging out in bars drinking beer. Here you can find good friends, good people, good harmony, good vibes."

I5: "Well, I'm in very good physical and mental shape. Especially mentally. Because we have a good atmosphere here. [...] It's a very healthy, very relaxed atmosphere and it's all for the best, to improve and to help people [...] here we really do live together very well and everyone is happy and everyone tries to learn so that the vegetables and everything we plant and sow turns out well..."

I6: "The garden gives you a great sense of peace and well-being, we have a group, we have created an atmosphere and it gives you peace of mind and better health, happiness, happiness. Physically, I'm better, more relaxed, I'm not so lethargic. I don't like television, so I come here or I go fishing."

I7: "Exercising, having extraordinary colleagues... we're actually celebrating our fifteenth anniversary. Two colleagues and I started it, and we're very satisfied because today there are twenty of us and we have a great time. We have a goal, which is to have lunch together every day we can, and we're doing very well."

I9: "...cultivating friendships and physically I feel better, I breathe better."

I10: "Well, it relaxes me, I enjoy myself and I spend a couple of hours or three here every day and that's my job. I relax here with my friends, we plant all sorts of things [...] that's the work I do here every day, I water, I enjoy myself, I clear away the things I have here, weeds..."

I11: "...I come here, I spend two or three hours here, even if I don't have anything to do, because there's always something to do if you want. [...] It's good for the plants, because plants have resources, because as soon as there's no wind, they have roots to start growing, I mean, things like that. [...] to keep you entertained for a while..."

I12: "Physically, it's good to have a daily activity, socially, to have a relationship with the world around us, we're in a group with others and maybe we're not all here at the same time, but we have a very special relationship, not with all 200 of them because that's impossible, but we do have relationships and here everyone knows each other and we exchange information."

I13: "Not wandering around... I get home and I sit down and my mind is racing, I think that's the worst thing, and here I am talking to one person, then another, and now I'm going over there and there are two or three more friends of the same age [...] If I were at home sitting around and my mind was racing, then my arms would be worse, my legs would be worse, my head would be worse, everything would be worse."

I15: "Physically, it gives you that, you have to dig, you have to fertilise, you have to disinfect, you have to... In short, all the things that go into the garden, that the garden has to be looked after and there it is, and if you don't look after it, you don't get anything."

### 3.1.2. Healthy Eating

Most of the older people interviewed said they followed a varied and balanced diet, with a predominance of fresh foods such as fruit, vegetables, legumes and fish. In many cases, **this dietary pattern is directly influenced by access to produce grown in their own urban gardens**, which

reinforces their commitment to a healthier and more conscious diet. Urban gardening not only facilitates the self-consumption of quality food, but also **transforms food preferences** and improves nutritional habits. Several interviewees indicated that they consume vegetables and fruit on a regular basis, in some cases as the basis of their daily diet, with a notable presence of salads and traditional dishes—such as stews and casseroles—that incorporate legumes, vegetables and animal proteins. This finding highlights the value of urban gardens as environments that promote eating habits appropriate to the needs of ageing.

I1: "...we eat a lot of fruit and vegetables at home. Lots of fruit and vegetables. I have a daughter, aged 26, who came home one day when she was 16 and said, 'Mum, from now on I'm not eating meat. [...] And then I had to get my act together and take a quick nutrition course and look for recipes that vegetarians could eat..."

I2: "... we eat a fairly varied diet at home, such as vegetables, rice, noodles, soups. [...] and fruit, because now it's orange season, there are two of us at home and we eat about 18 to 20 kilos of oranges every week."

I4: "Since I have a vegetable garden, I eat vegetables such as broccoli, cauliflower, chard, lettuce..."

I6: "I have a lot of variety [referring to what he has planted in his garden], so I mainly eat vegetables and fish."

I7: "Well, I'm lucky to have a partner who cooks very well, and we usually eat a lot of salads and stews."

I9: "...white meat, fish and, above all, vegetables, taking advantage of the fact that we have a plot of land, so there's always something to eat."

I10: "I eat everything, I don't have any problems with food, meat, vegetables, anything you put in front of me. It's true that I don't like vegetables very much, but look what we have here [points to what he has planted in the garden] [...] since I've been here, I eat more vegetables."

I11: "Well, I especially eat a lot of variety. [...] I buy a variety of all fruits. I almost always have almost all of them at home. [...] We usually eat stews, which are called pucheros, with chard, vegetables, chickpeas, potatoes, because I really like stews."

I12: "Every day, salad. And tomatoes are the main ingredient in the salad."

Tomatoes are part of my daily diet. I eat legumes at least once a week, rice, pasta..."

I13: "Mainly beans. I'm talking about chickpeas, kidney beans, lentils, rice, then some meat..."

I14: "Well, beans, chickpeas, legumes, potatoes, meat, fish, everything varied."

Most of the older people interviewed say they **regularly consume the food they grow in their urban gardens**. This self-consumption not only improves the quality of their diet by incorporating fresh, varied and organic products, but also strengthens their connection with food and nature. Several participants highlight the **superiority of these foods over supermarket products**, both in terms of taste and nutritional quality. In addition, the consumption of these products often extends to the family or neighbourhood environment, which encourages exchange and cooperation. Some interviewees even mention that they look for new recipes to make better use of what they grow, while others list the products they consume regularly.

I2: "... It's not that I eat it, it's that my children eat it and if there's any left over, then a relative or an acquaintance will have some."

I5: "Yes, yes, yes, we do everything here and most of it is organic, so of course, the taste of, for example, a carrot from here compared to a conventional one is a world of difference, the difference in taste and smell and everything [...] the products here are obviously better than those in the supermarket, without a doubt, and then there are also the nutrients we add, which are also natural nutrients..."

I8: "Well, that's one of my priorities [referring to eating the food he grows]. I try to go online and always make them in different ways and not just how we're used to, for example, aubergines, which we only eat in one way, but you can eat them in many different ways, and I try to change [...] I try to use everything we grow for our own consumption, to give to colleagues, for example, I have onions and I say: take four onions from there..."

I14: "Yes, of course, I eat everything I grow, potatoes, onions, garlic, lettuce, peppers."

I15: "Yes, we always eat the produce we have. We always pick it from the garden and eat the potatoes, cucumbers, whatever there is."

The older people interviewed agree that **their diet has improved thanks to eating food grown in the urban garden**, particularly valuing its taste, freshness and naturalness compared to supermarket products. Several participants highlight that **these foods give them greater confidence, as they know where they come from and how they are grown**, which reinforces healthy habits and more conscious eating. Some even associate the flavours of the garden with **childhood memories or greater satisfaction when eating**, while others recognise a slight, though not drastic, improvement over commercial organic products. In general, food self-sufficiency and the direct link to the land emerge as key factors in this positive perception.

I1: "I remember my father coming up with a basket full of tomatoes, cucumbers and peppers, and now when I'm given a tomato, I get that smell from my childhood. However, when I buy a kilo of tomatoes at the market, they don't smell of anything, they're like plastic..."

I4: "I think our food is better because what you buy can't be like what I grow."

I6: "...well, yes, because I know what goes into the food I put on the table, I don't add any hormones. Some people do..."

I7: "At least I feel more comfortable with what I eat. I don't know if it's much better, but at least I know what's in it."

I8: "Yes, for the simple reason that I know what I'm eating. It's 100% organic and the difference is, I don't know if it's because you grow it yourself, but it tastes better."

I11: "Of course, my food is healthier, tastier, just look at the tomato plants here, look how beautiful they are, and compare those tomatoes with the ones you buy at the supermarket, they're completely different, of course."

I12: "In addition to the trend, which I already follow as part of a natural diet... when the lettuce and courgettes arrive, for example... you have to get the most out of them. [...] They can be eaten puréed, grilled in slices..."

### 3.2. Personal Factors

The second area of analysis focuses on personal factors and addresses how older people **perceive and experience their psychological well-being** in relation to their participation in the urban garden, identifying the garden as a **space that promotes mental and emotional balance**.

#### Psychological Well-Being

Most of the older adults interviewed perceive themselves as having good psychological well-being, associated with tranquillity, emotional stability and satisfaction with their daily lives. Many of them highlight the **positive role of the urban garden in their mental health**, as it offers an **active routine, contact with nature and rewarding social relationships**. Although some mention experiences of stress, emotional sequelae or minor forgetfulness typical of old age, the overall balance is favourable. The garden is becoming established as a **space for emotional support that promotes resilience, autonomy and psychological balance in old age**.

I1C: "Ah, I'm very well, I tell you, I took some time off because I was very, very stressed, because my job is very demanding and my body and my head were telling me that I had to stop, but now I'm great and my body is telling me to retire [I could have done so already] and devote myself to this, because the garden is filling my heart and soul..."

I2: "Yes, yes. And it also gives you a chance to socialise outside the garden, maybe go to the cinema or the bullring or the football. So a garden is very important."

I5: "...I think being active here in the gardens also helps the mental well-being of the population, it gives you a sense of stability in terms of mental and physical health."

I7: "I feel very good, yes. This association has helped me a lot, and being here in the garden... and also, whenever I can, I have a boat and I go fishing..."

I9: "This has many advantages [...] it's good vibes and psychologically very good. It frees you up a lot."

I14: "...And I feel old now because with this DANA, I'm really nervous, I saw so many cars being swept away by the water that I'm still... I'm still mentally there, I'm still shaking and nothing, little by little we'll get through it..."

**Participation in urban garden activities** significantly improves the **psychological well-being** of older people by offering them **contact with nature, active occupation and opportunities for socialisation**. Many highlight that growing their own food brings them **personal and emotional satisfaction**, while others value it as a form of disconnection and mental relief. The **space for autonomy it offers in family life** and its role as a meeting place that **strengthens social ties after retirement** are also positively appreciated, and it is perceived as a key resource for emotional balance in old age.

E1: "And then, being in contact with nature, for example, I go to the vegetable garden and I might spend hours walking around the garden, and I can assure you that I come back with a totally different energy, it changes everything, it relaxes me. [...] It's work that you've done and then you get a reward for it and then you make yourself a salad and you say to yourself, look, I made this, this came from me. [...] Well, if you've grown it yourself, I think that on an emotional level it's very satisfying, it gives you pleasure. [...] your mind is occupied and your body is too."

I2: "For me, spending time in a vegetable garden is the greatest thing because when you're in the garden, everything else you might have, well, you don't have it anymore, it disappears [...] it's therapy."

I3: "In everything, I think physically and then emotionally, and at home it's great because you arrive and you have your space, you're here, your wife has hers, and then you go home and you get together, and I think it's very good for the relationship..."

I4: "...instead of being involved in other things, here you come and open your mind more to coming here to the garden, asking questions about watering, interacting with others..."

I6: "...doing activities, we do a lot of things here, I myself, I don't know if they've explained it to you. There's a garden here with a school and the teacher wanted us to plant it and we said no, no, we'll teach you, as the saying goes: don't give a person a fish, teach them how to fish, so that's how it is."

I8: "Well, socialising is one of the most important things I give them, and you also get some exercise, and when you get tired you talk to one person, then another... and that gives people a zest for life, especially when they're retired."

I10: "...there are a lot of people here and I think they feel the same way I do because they come here, relax and pass the time, and instead of being at the bar, we're here."

I11: "For me, it's what I was telling you. It takes my mind off everything I have outside and when I'm here I'm focused on the four floors. Before I had this, I was without it for a while after I retired... Of course, I used to walk two or three, four hours a day, which frees you up a bit, but this is better, it clears your mind, it's like when you have children to look after."

I12: "Psychologically, it means that... what would I do at home? If every time I come here I spend a couple of hours, at least, those two long hours multiplied by 80 visits, what would I do during those 80 visits at home? What would I do? I'd probably be in the way, but here I'm doing something useful, that is, I'm looking for a production, a material production, so to speak, and this is almost a production, let's call it spiritual or at least social..."

### 3.3. Social Factors (Breve Introducción)

Urban gardening encourages active ageing by promoting informal, intergenerational learning and providing a key space for social interaction. Older people acquire agricultural knowledge through shared experience rather than formal training, which reinforces their empowerment and collaboration. Gardening also promotes emotional well-being by fostering meaningful relationships, active routines and connection with the community.

### 3.3.1. Education

Most of the older people interviewed lack formal training in agriculture, but have acquired **knowledge through practical experience, family and intergenerational transmission, and collaborative learning with other gardeners**. Some have participated in specific courses or workshops, while many highlight the value of knowledge passed on by parents or grandparents and mutual learning in the garden environment. Self-taught strategies such as reading and trial and error are also mentioned. This informal, accessible and continuous learning is perceived as an effective and adapted way of active ageing, where age becomes a strength for sharing and expanding knowledge.

I1: "No, let's see. I sign up for everything there is. [...] For example, when they did this course on urban gardens here, I did come. [...] I've learned a lot from the farmers here. [...] Because they have, like my father, wisdom. Natural wisdom. [...] They don't teach you that at university."

I2: "...I don't know much about that [agriculture] because [...] I'm not a farmer, but I have some basic knowledge and if I don't, I ask someone who knows and then I try to do the best I can."

I3: "Well, they give courses here and what they explain is always interesting [...] it's always good. They give seminars from time to time, some courses, some talks... well, I think they're interesting [...] As for my colleagues, there are people who have much more experience because they've been doing it longer, and it's always good to learn [...] time makes you correct your mistakes. The first year goes by like everything else, you make mistakes, like you always have, but little by little you learn and the interesting thing is that last year I did this wrong and now I do it a little better..."

I5: "I've been evolving with all this my whole life. Especially when I was young, I adored my grandfather, and he taught me and told me [...] I've been cultivating myself all my life, so you had to acquire knowledge through word of mouth [...] so when you get together or when you get close to someone who has a lot or knows a lot or... then you always learn something, you always learn something."

I6: "...through practice, I've been here for eight years. [...] Well, we go, let's say, teaching each other and learning from each other."

I7: "Well, I've read a book, specifically, which I've had for five years now, that talks about the whole subject of agriculture based mainly on the Mediterranean area. And it helped me a lot. But what has helped me the most is what I've learned here, because here there are people who really know."

I9: "The training is... you try things out and you go along... as you talk to all your colleagues, some know more, so they explain things to you and you try them out too."

I10: "Me, from watching the neighbours. Here they teach you and you watch each other, what the others are doing, and after a year's experience of planting, if something doesn't work, the next year you plant it differently, you try and try and it works out. It's going pretty well for me."

I11: "Just through practice and also from the older people, it's a chain. I remember when I was a child and I used to go with my father, and you learn from the older people about planting, the manure you use, the products... Of course, I know all that because I've learned it from the older people."

I13: "I learn from everything, from seeing it, sometimes I can see it, other times I pick up a book on farming or nature, but that's all. [...] Here you learn everything, and what you don't know, you learn, because one person asks, another asks, and everyone does it in their own way."

Most of the older people interviewed show a strong willingness to **share their agricultural knowledge** with both their peers and younger people, valuing experience as a useful source of knowledge that is worth passing on. Many are already actively involved in **mentoring new gardeners**, valuing teaching as a way to foster commitment, coexistence and the continuity of traditional knowledge. The importance of **collective learning and the daily exchange of knowledge among peers** is also highlighted, as well as the desire to bring new generations closer to these practices from an early age. This educational commitment makes the **urban garden a practical, community-based space for intergenerational learning**.

I3: "Yes, if they ask you, you're happy to tell them what you know, and people are grateful, they always thank you for the information you give them..."

I5: "For twelve years or so, even at university, I've always tried to teach people what I know, so I've tried to teach people so that they can learn about this [gardening] and do their own little things because I know it's very relaxing and I'm delighted to be able to share my knowledge with others; that's what I've lived for."

I6: "People my age, if they came, yes, right away, if they committed themselves, yes, because here a lot of people think they can come and it's like going to Mercadona, plants and the day after tomorrow you can pick them up, but here you have to be here every day..."

I7: "We're already doing it, as much as we can, there's no problem here, neither with the association members nor with outsiders. Lately, a lot of young people have joined, and we need them, and we're here to help anyone who comes."

I9: "Yes, of course, I became a grandfather two months ago, and I'm deciding that when she's 4 or 5, I'll bring her here, and I'd like to pass this on even more."

I10: "When people ask me, I tell them more or less how I do it, and we help each other. Anyone who wants help, because there are people who don't want help, no."

I12: "There are people who are more qualified than me, but within my knowledge, I have no problem teaching others."

The responses collected reflect a broadly **positive view of the interaction between older people and younger generations** in the context of urban gardens. Most of the interviewees agree that this relationship can be hugely enriching for both sides: older people contribute experience, practical knowledge, serenity and a more settled outlook on life, while young people bring enthusiasm, vitality and renewed energy that benefits older adults emotionally. This interaction is seen as a **two-way teaching-learning process** that not only facilitates the transfer of agricultural knowledge, but also strengthens social ties, fosters mutual understanding and creates fairer, warmer and more motivating spaces for coexistence.

I1: "Everyone here is retired now, and I promise you that when I talk to them, I notice that they are a wealth of wisdom. There are some who have hardly been to school, but they have a wisdom [...] that they have acquired [...] if young people want to learn, that's good, because we are treating today's youth very badly and they also have power, and there are many older people who have told me that they are willing to come with the kids [to the garden] to teach them and then let them continue on their own..."

I2: "...we have to understand them [young people] a little better, have a more friendly relationship with them, and they could benefit from the few good things we older people have [...] if they ask you questions about their family, problems they have with their parents..."

I3: "Yes, the relationship is great [with the young people] and they also want to gain experience and you feel really good being able to teach something of your own to the young people who come."

I6: "Well, we could give the young people experience and they could give us vitality..."

I7: "The relationship is built up over time and you help them with the little you know... in the long run, that's what friendship is all about and it makes it more enjoyable for everyone to come."

I8: "Well, look, intergenerational association is very important, and we have a school garden [...] young people today have no idea. You ask them, "Where does this come from?" and they say, "From Mercadona" [supermarket]. That's important."

I9: "Above all, passing on experience and showing that there are people older than me who give you a sense of serenity and tranquillity, which is very commendable."

I15: "Well, it's an experience that no young person has. Like I said, I've worked in construction, I've worked in a restaurant, I've worked with sheet metal and boards. And my experience would be joining the Red Cross for humanitarian aid. Yes. But I'm getting on in years and I can't do it anymore. Otherwise, I swear I would."

### 3.3.2. Social Support

Most of the older people interviewed maintain an active social life through various weekly activities, with the **urban garden being the main place for meeting and socialising**. There, they not

only share agricultural tasks, but also experiences, learning and meaningful bonds. In addition, they complement their socialisation with activities such as hiking, fishing, swimming, visits to the market, or occasional meetings with friends. Family relationships are also important, whether through visits from children or walks with their partner.

I2: "...I don't go to the pub during the week, because if you go out, you come here to the garden, you walk around the garden, if you're at home and a friend comes over or your children come over..."

I6: "I don't know any bars, well, I don't like going. If I ever go to the retirement home, I might have a coffee and that's it, nothing else, or I go fishing or to the garden, and that's it, I don't have anything else. And well, I like being with my wife and godchildren from time to time, although they also have their own activities."

I7: "Fishing, for example. My friends from the Perelló sailing club, when we're not out at sea, we're out exchanging ideas or looking for ways to catch something..."

I9: "...this is my main activity, I was also in the dance group [...] Yes, my wife dances in the group and I used to sing in the group. Now, due to lack of time, I've given it up because I was a bit overwhelmed with too many things. [...] Fortunately, I have many relationships..."

I10: "No, when I leave here, I go home and don't go out. Maybe I go out for a little while in the morning and meet up with a friend for an hour or so, and then I go to the garden, and that's it."

I12: "We usually get together once a month with colleagues from here [referring to the vegetable garden] in Alaquas. One colleague is also a teacher in Cuenca and another person [name of the person] is also from Cuenca, and we talk about things related to young people, such as food, military service, girlfriends, our lives... as if religion and politics didn't exist."

I13: "Mainly here [in the garden] and at half past five I go home and spend a little while there with her and then at half past five or six I leave and we go out for a walk. [...] And at the weekends I go to the countryside, I'm in the countryside every weekend."

I15: "Well, we get together with friends [in the garden], one tells a joke, another tells another, I tell another. And that's the relationship I have, because now I was sitting with a friend who can hardly walk with [name of the person], and I feel sorry for the man. But then you get there and you spend some time with him and you talk and he tells a joke that I tell."

The interviews reveal that the urban garden functions as a **key space for social interaction for older people**, where **meaningful bonds** are formed and a **mutual support network** is promoted. Most participants confirm that working in the garden allows them to interact with other people in a natural and constant way, whether through shared tasks, everyday conversations or mutual help when faced with difficulties or doubts. These **relationships** not only improve their **emotional well-being**, but also contribute to their **physical and mental health** by creating an environment of camaraderie, solidarity and belonging. The interaction goes beyond the instrumental; it involves trust, affection and a collective sense of community that reinforces the feeling of usefulness and active participation.

I2: "Yes, of course, I do what I can and what I can't do, I say, "hey, so-and-so, can you do this for me?", and they do it [...] for example, I can't bend my back, but as there are several people watering, I say, "open it for me", and they open it for me, and then I tell them I've had enough and they close it, and I'm grateful."

I9: "It's good for my health [the urban garden], I think, health, I don't know, especially the interpersonal relationships between the "gentola", between the good people around here, and I'm very comfortable, I'm very happy."

I11: "Very good, as I said before, very good. Me and [names his friend from the next plot], it's just what I'm telling you, there's a relationship, I knew him from seeing him around here and I knew he was a teacher from the beginning, but now we know each other, well, several more things that I didn't know about him and he didn't know about me. [...] There's an incredible sense of solidarity here in the allotments, and we don't lock up any of our small tools or anything. It's incredible..."

I15: "Yes, friendships are formed because you have them next to you and if you smoke, for example, which is what we were just talking about... Hey, give me a cigarette! How are the cucumbers? How are the beans? The courgettes? And so on."

### 3.4. Health Factors and Social Services (Añadir Breve Introducción)

Urban gardening is emerging as a key resource for promoting health and preventing physical and mental illness among older people. The regular physical activity involved promotes vitality, reduces sedentary lifestyles and improves mood, sleep and overall emotional well-being. Beyond its physical benefits, gardening encourages mental stimulation and social inclusion, creating a therapeutic environment that helps prevent isolation and dependence. Participants also highlight its role in long-term care, pointing to improvements in depressive symptoms and the inclusive and cooperative nature of gardens, which offer meaningful participation for all.

#### 3.4.1. Health Promotion and Prevention of Physical and Mental Illness

Participation in urban gardening is perceived by most of the older people interviewed as an important factor in **improving their physical and mental health**. The tasks carried out in this space provide **regular physical activity**, contribute to **daily vitality** and offer a **practical alternative to a sedentary lifestyle**, preventing isolation or inactivity after retirement. In addition, many point out that this activity not only strengthens the body, but also **improves mood, appetite, sleep quality** and overall emotional well-being. For some, the garden successfully replaces the gym or becomes a functional exercise environment through traditional techniques. The diversity of tasks, together with a **healthy and multicultural environment**, also enriches the experience and promotes overall health.

13: "Yes, yes, yes, yes, well, the physical improvement is very good, and also, when you come and spend two or three days doing physical exercise, you feel much better, you have more appetite, you sleep better, which is very pleasant."

15: "Well, there's everything here, isn't there? But generally, the people who are here are all well because they do what they think they should do. They don't do any more or any less, no one is forced to do anything [...] the atmosphere is cheerful, it doesn't matter if you're old or young, that's how it is, it's the atmosphere, healthy, calm, relaxed, where everyone communicates, we don't care if you're from Peru or China. Because here there are Chinese, Colombians, Argentinians. There are all races, colours and everything here. There are black people, white people, there's everything here. Separate, separate... But here that's not noticed, here that's not categorised."

16: "Yes, I'll say it again, instead of living a bad life in Valencia, sitting around [...] well, look here. I haven't stopped all morning, this afternoon I'm going back... [...] Here, well, look, normally, from working with the machine, weeding, hoeing, sowing, you normally go with a hoe, scratching and removing weeds, you have a pretty good job within the limits of what's available."

18: "We have a machine, a motorised hoe, but I like to do it the old-fashioned way, with a hoe. Why? Because as long as I can do it, I get exercise. If you think about it, you can do all the exercises you want here."

The older people interviewed unanimously highlight the positive effects that working in the urban garden has on their **mental health**. For many, this space represents an **environment of disconnection, tranquillity and concentration**, where they can **take their mind off** their daily **worries** and focus on **manual tasks**. The pleasure of **activities such as planting, weeding or caring for plants from germination to harvest** reinforces the emotional bond with the garden and keeps the mind active, as it requires constant attention, decision-making and functional memory. Likewise, the **social component** associated with gardening is also perceived as key to maintaining a sharp mind. Taken together, urban horticulture is presented as a **comprehensive therapeutic tool** that contributes to cognitive stimulation, daily enjoyment and mental balance in old age.

12: "Here I forget everything, I mean, I'm at work and if I have to make a ridge, I'm not thinking about the birds flying overhead, I'm focused on what I'm doing [...] the countryside is wonderful, all the tasks are enjoyable, from the moment you start planting to seeing the plant grow and moving it around, checking for pests that could harm it, taking care of it because later that plant will give me a product and satisfaction when I eat it."

13: "Good, very good, it's great for me [being in the garden] because I have a bit of tinnitus, so it's perfect for me because there's no noise here, which is very good [...] And I've also shared this idea with some of my fellow gardeners and they also say that mentally and psychologically, they think it's wonderful. I think it's very good."

I6: "I feel good about myself [in the garden]. When I come in here, it's like when you go to work, you switch off, and when I come in here, I leave my problems behind."

I7: "I'm great here and I do everything, planting, sowing, cultivating, watering, weeding... a bit of everything..."

I11: "Mentally, the best thing, what it gives me most, is that until I leave here, my mind is focused on the four plants. If you tell someone that you can spend 4-5 hours here every day [...] it's simply that you find a way to pass the time doing little things, of course."

I12: "Well, here you can switch off if you have something on your mind and you arrive and say, "What do I have to do today?" Well, today I have to start removing this, or I'll go and see if the beans have sprouted, or I'll go and sulphate the cabbages so they don't rot..."

I15: "Here I do everything, digging, weeding and checking the plants to see how they're doing, if they need fertiliser, if they need other things like weedkiller or something to kill the weeds."

### 3.4.2. Long-Term Care

The interviewees' responses indicate that working in urban gardens could help **reduce the risk of dependency or disability** in older people, mainly due to its ability to **promote physical activity, mental stimulation and emotional well-being**. Some participants report **improvements in depression** and highlight the **therapeutic** value of being in contact with nature and maintaining an active routine, while others emphasise the importance of mutual support and the inclusion of people with disabilities in a cooperative environment.

I1: "Sure, it improves [mental health problems]. I know people who suffer from depression, especially mental illness, and I know people who have been cured by going to the garden. Little by little, I think, as I said, nature works miracles..."

I2: "...a person with a disability can certainly exercise in the garden and it also benefits you because, if you see that someone needs help, you can help them."

I5: "This enriches the soul, the body, the mind, it enriches everything. You come here lame and you leave running.

I6: "...if a person is at home sitting down and not moving, logically they have more disabilities than someone who comes here and works. For example, next to 100 [plot number], there is a very old man, an elderly man, who walks with a stick, and you have him there working every day. That person won't get depressed or lethargic because of that, because he's active..."

I7: "For me, apart from what the fields are, I consider this a health centre and that everyone should consider coming and having the opportunity to enjoy this option that we have, which years ago we couldn't even dream of having."

I9: "Yes, for example, if it can help a person not to be dependent. To be more agile. In fact, the guys from [names an association] with functional diversity, at a certain point they may find that by coming here you set guidelines, there is an improvement in mood."

I11: "Yes, I do. Depending on the disabilities, of course [...] It also depends on each person's willpower."

### 3.5. Purpose in Life

Urban gardens provide retired older adults with social connection and a renewed sense of purpose. While some faced challenges during retirement, many found gardening to be a meaningful activity that promotes active ageing and personal well-being.

### Retirement

The experiences of retirement among the older people interviewed are diverse: while some saw it as an opportunity to reorganise their lives and enjoy new activities such as urban gardening, others found it difficult due to health problems, forced retirement or the loss of their role at work. The

emotional impact of this stage depends largely on factors such as health status, the voluntary nature of retirement and the support environment. **Urban gardening** emerges as a useful tool for continuing physical and social activity, providing a new **purpose in life**.

I6: "Well, I retired a year early because I had colon surgery, and the only thing I've felt is that I've retired and started seeing doctors [...] this activity has also helped me fill the time."

I8: "Well, when I retired, I found that I had to find ways to keep myself busy. It's a bit of a sudden change, because you have routines and then you have to change them, and now I have to come here in the mornings and do things..."

I10: "...A person has to retire and retire, I've felt fine, I haven't had any problems, I haven't had any stress or anything like that [...] this [having the garden], well, first I came to help a lady who my wife used to look after and her husband died and she had a plot there and she got me involved without meaning to and then I went to the town hall and applied."

The responses analysed show that participation in the **urban garden** after **retirement** was a **strategy adopted by many of the interviewees** to fill their time in a meaningful and active way. For most, this meant spending more time in the garden, finding in it not only a source of entertainment, but also a space that promotes well-being, usefulness and health.

I2: "...I found out about the community gardens, I applied, I was accepted, and here I am.'

I3: "Afterwards, shortly after [retiring], I quickly realised that I liked it.'

I5: "Yes, this is investing in your health when you're older.'

I7: "... as soon as I found out about this in the newspaper, I went to the council and they gave me the application form, I filled it in and when I had the chance I joined. For me, this has been incredibly positive.'

I9: "Yes, 100% [it takes up the time I used to spend at work, in the garden].

I11: "I often come here, maybe I bring a banana or something, and there are several others who come here for lunch too, and you chat for a while and clear your head, you know [...] that's what I mean, spending two or three hours, even if you don't have to do anything.'

I13: "Yes, mostly since I retired, I've been doing this. I don't do anything at home.'

### 3.6. Physical Environmental Factors

Older adults perceive urban gardens as healthier and more relaxing spaces than the urban environment, highlighting their cleaner air, tranquillity, and nutritious homegrown food. Despite some concerns about pollution and chemical use, most participants express a strong preference for the garden and trust the safety, taste, and freshness of the food they produce.

#### 3.6.2. Clean Air

The analysis of the quotes **shows an ambivalent perception of the air quality surrounding urban gardens**. On the one hand, several interviewees clearly **highlight the respiratory** and well-being benefits associated with the natural environment of the garden, especially in comparison with the urban environment: they value the vegetation, the lower traffic and the cleaner air in this green space. In other cases, there is a **personal need to physically distance oneself from the city to avoid stress, breathe less polluted air** and improve quality of life. However, other testimonies reflect a **more critical or sceptical view**: mention is made of pollution from the use of chemicals in the garden itself, or a broader mistrust of the global environmental state, including water, the atmosphere and the seas. Thus, although urban gardens are recognised as spaces with relatively better air quality, some interviewees **question the extent to which they can really be considered healthy in a context of widespread pollution**.

I1: "Well, sometimes yes, sometimes no, because it's what I'm telling you. For example, sometimes I put my hand up because when they're spraying the air, I can feel it's polluted and you can smell it a lot. [...] Well,

*imagine that all this is stuck to the fruit in the supermarkets and we're eating it [...] and then, when it's more or less normal [without the smell of sulphur], well, you do notice that, of course, there are a lot of trees, a lot of green, a lot of this and that, so it's much better than in the city.*

I2: "No, no. [...] Because the atmosphere isn't ecological, the water isn't ecological."

I4: "Well, not as good as it could be, but within reason, it's better than working on a motorbike delivering behind the exhaust pipes of cars in the capital..."

I5: "...The air here is polluted, well, here in Valencia and in all the big cities. In all the ones I've been to, the pollution is terrible. So I've bought some land outside the city, 60 kilometres away, in Albaida, where I have fruit trees, animals and everything. Otherwise, this place stresses me out, the oxygen here stresses me out a lot, it makes me nervous, it makes me neurotic. And when I'm there, I sleep really well, I feel great, I mean, you can tell in everything, I feel it in my body, in everything..."

I6: "Here, yes."

I8: "Not nowadays. Because there's too much pollution in every aspect. Nowadays it's bad..."

I9: "100% or 1000%. It's true that we're still close to the town, but even so, the air is wonderful."

I12: "Here where we are, yes. Because even though we're a stone's throw from Valencia, we're surrounded by trees on the right and trees on the left and some amazing green areas. [...] So the air I breathe is healthy."

I14: "Well, no, because there's a lot of traffic. If you go out on the street, there's a lot of traffic, a lot of smoke. If you go to a shop [names different supermarkets], you can't breathe properly either. You have to go out to the countryside to be able to breathe properly. I mean, you breathe better in the garden or in the countryside."

I15: "That's not true. No, everything is polluted, and it's getting worse every day. If we look at all the old cars that pollute and the planes that pollute, it's outrageous, and everything is polluted. Even the sea is polluted, the boats, so everything is polluted [...] because the planet is in a very bad way... the thing is, we don't realise it, especially older people, but young people are studying and know more about what's going on."

The interviewees reflect a **general preference for the urban garden environment over the urban environment**, especially in terms of **emotional well-being and tranquillity**. Several interviewees clearly express that the garden **represents a space of calm, relaxation and personal satisfaction, contrasting with the stress, pollution and "commotion" they associate with the city**. For some, this contrast is so striking that they would prefer to live permanently in the garden. Others value the emotional component of the work done there. Despite this, there are also testimonies that minimise the difference between the garden and the city, either because the garden is very close to the city or because they do not perceive a significant change

I1: "...keep in mind that the garden is right next to the city of Valencia, it's right next to it."

I2: "I feel different [when I'm in the garden] because I come with the excitement of doing a job, I do it, and when I leave, I look at it and look at it again. It's personal satisfaction."

I3: "Well, as I said, the fresh air, let's say, the contact with people. I also like the city, of course, I like sharing and having friends, going out with them..."

I4: "I don't notice anything..."

I6: "Well, the city is very... I don't like it very much. Just yesterday we went to the centre and, to be honest, I felt overwhelmed [...] No, I don't like it. I prefer peace and quiet."

I7: "Well, I would stay here [in the garden], yes."

I8: "It's very difficult to explain. Here today it feels like you're in a more proper environment [in the garden]. When you're in the city, you see all the pollution, which also reaches here, and that makes me feel uncomfortable. I've realised that the older I get, the less I can stand crowds; I look for peace and quiet."

I11: "Well, a lot of... a lot of relaxation."

I13: "I feel comfortable [in the garden]. You go to a place where you feel comfortable, right? Well, that's it."

I14: "Well, you notice the change between being outdoors and being in the city, or in the village, wherever you live, of course you notice it."

### 3.6.3. Healthy Food

The quotes analysed show that interviewees perceive a clear difference between food grown in their gardens and food bought in supermarkets. They particularly value the taste, freshness and safety of what they grow themselves, highlighting the health benefits and their confidence in the production process. They also express mistrust of industrialised and organic products on the market, and some point out that healthy food is not available to everyone. In addition, the **natural environment is associated with a more enjoyable gastronomic experience**. Furthermore, concerns about **food safety and local consumption** are echoed. In general, urban gardens are presented as a **source of healthier and more satisfying food**.

I1: "95% of what we eat comes from Morocco, where they use a lot of pesticides that are banned here [...] if you look at the labels, it says "packaged in", but they all come from either South Africa or Morocco."

I2: "Food does vary because, speaking for myself, if I grow a lot of produce and I know what I'm growing and how I'm growing it, the taste is not the same as what I buy at the supermarket."

I3: "Oh, totally different [food from the garden and the supermarket]. You try to grow it with organic products, which is very important. Industrial products, large-scale, large-scale food production, don't use those things because it's more complicated [...] if they're organic, they're very expensive and then who knows if they're really organic. Here we know what we put into the product."

I6: "Better, better. The best wealth is here, in the countryside, not in the city. And eating this food from here is 100 times better than what you get in the city. Normally, in the city, I buy things because, ecologically, I buy things, but... as little as possible, everything I can get from here I keep and have..."

I7: "In the city, you have to go shopping, and it's not the same as eating something you've grown, raised and cared for yourself. What do you know about the things you buy? How long they've been there and how they're going to be..."

I10: "Well, man, here we eat healthier than what they buy at the supermarket. For example, here when we have tomatoes in the summer, it's heaven. [...] Then in the summer we plant cucumbers and now, for example, I buy a cucumber from [names a supermarket] and it tastes like nothing. Now I have onions, I have beans, I have cauliflower, broccoli and lettuce, rosemary..."

I12: "The first is that those who live in the countryside can grow their own food. The second is that those who live in the city have to buy what is available, and we don't know if it's locally sourced or has travelled 100 kilometres..."

I13: "Well... there's no comparison... eating food from the countryside and living in the city and eating food from the city, it's a world of difference. Eating food from the countryside is healthier."

## 4. Discussion

This study highlights the potential of urban agriculture as a mechanism for promoting active ageing, referring to the benefits perceived by older people who engage in this activity. The results are consistent with other research that similarly shows that community gardens have multiple benefits for the well-being of older people. A general finding from the interviews refers to the benefits associated with physical, psychological and social health determinants, with participation in gardens providing an opportunity to stay active, promoting joint mobility, strengthening muscle tone and reducing body stiffness. It was also observed that participation in gardens contributed to improving mental health and mood, constituting a tool for combating stress and improving emotional well-being. These findings are consistent with those of other studies that point to the benefits of participating in green spaces for psychological and physical well-being [57,34,58]. Along these lines, the results reported a positive impact of participation in urban gardens on social and emotional well-being, due to their ability to promote social contact and expand social networks, especially after the

end of working life and the onset of retirement, making them a tool for promoting social participation, a sense of belonging and resilience. A recent study has addressed the importance of urban gardens as facilitators of community connections and frequent socialisation [59]. In addition, the findings indicate that community gardens have a positive impact on food consumption. Users of the plots agree on the nutritional benefits of consuming home-grown food, not only because of the continuous access to fruit and vegetables, which promotes health, but also because it is fresh food. These findings are consistent with existing literature suggesting that growing one's own food in small green spaces improves dietary practices [60,61].

The narratives collected in this study point to urban gardens as significant enablers of physical activity among older people, offering a form of exercise that is perceived as accessible, purposeful and embedded in everyday routines. Rather than engaging in structured physical activity in formal settings—often perceived as rigid or intimidating—participants describe gardening as a practice that accommodates their bodily capacities, preferences and rhythms. This aligns with findings from previous literature, which indicate that allotment gardening offers moderate-intensity activity conducive to maintaining muscular tone, joint flexibility and cardiovascular health, without the psychological or logistical barriers that can accompany traditional sports or fitness programmes [32,31]. In this regard, gardening may represent one of the most sustainable forms of physical activity for ageing populations, particularly when it is integrated into habitual routines and tied to a broader sense of purpose.

Participants consistently associated their physical engagement in the garden with improved well-being, reduced sedentary time and a more active lifestyle. These findings are supported by evidence that urban gardens contribute to improved physical function, reduced subjective health complaints, and greater cardiopulmonary endurance in older adults [34,31]. Importantly, these benefits appear to be grounded not only in the physiological exertion involved, but also in the autonomy and satisfaction derived from cultivating one's own space, following personal schedules, and enjoying the results of one's labour. As highlighted by Hawkins et al. (2013) [35], the distinction between "doing" and "being" in the allotment environment helps explain why participants remain motivated and engaged: physical effort is not framed as exercise, but as meaningful contribution. Moreover, the results confirm the role of gardening in reinforcing a sense of agency and usefulness among older adults, helping to structure their daily routines in post-retirement life. Many participants described the garden as their main or only structured activity, offering them a space of movement, interaction and continuity. This echoes the conclusions of Mejías Moreno (2013) [33], who observed that older adults view the garden as a source of both physical maintenance and emotional reward. These functions are especially relevant in later life, when risks of isolation, passivity and decline in mobility increase. The reported experiences also resonate with evidence suggesting that garden-based activities enhance self-rated health, particularly when they are performed in a supportive and aesthetically pleasing environment [38,30].

In addition to its value for mobility and fitness, the garden is strongly linked in participants' accounts to their dietary habits and food practices. The testimonies reflect how access to self-cultivated produce not only diversifies the diet but encourages more conscious and healthier eating choices. These results are consistent with findings from studies in both European and North American contexts, which have identified gardening as a driver of improved nutritional behaviour, particularly through the consumption of fresh vegetables, legumes, and fruit [40,33]. Several participants described how their involvement in gardening influenced their food preferences and cooking habits, often extending the benefits to their families or neighbours through informal exchange or shared meals. The quality and freshness of garden produce were repeatedly emphasised as superior to store-bought alternatives, both in taste and trust. This perception reflects a common pattern in the literature, where older adults report a heightened appreciation for food whose provenance is known and whose cultivation they can control [39,35]. In some cases, gardening evoked memories of rural or family-based agricultural practices, reinforcing emotional bonds with food and land. These reflections also suggest that urban gardening may contribute to a sense of food

security and personal responsibility for health, while encouraging environmentally sustainable behaviours, as suggested by Jo et al. (2022) [37].

Furthermore, urban gardens are perceived by older participants as environments that promote emotional stability, autonomy, and a renewed sense of purpose in later life. These spaces appear to offer a unique form of support for psychological well-being, through a combination of structured routine, contact with nature, and social interaction. The testimonies suggest that gardening supports both emotional regulation and resilience. Participants recurrently described the act of tending to plants, engaging with the land, and sharing space with others as key elements in managing stress and cultivating a positive state of mind. These experiences closely echo the restorative functions attributed to urban gardens in studies such as those by Hawkins et al. (2013) and Guo et al. (2024), where allotment and community gardening are shown to provide an effective coping mechanism through sensory engagement, distraction from daily stressors, and the stimulation of positive emotions [35,38].

The sense of psychological renewal expressed in the interviews resonates with Attention Restoration Theory (Kaplan, 1995) [62], as highlighted by Hawkins et al. (2011) [32], suggesting that the gardens offer a cognitive “reset” that facilitates mental restoration. The comments made by participants who described arriving at the gardens feeling depleted and leaving reinvigorated reflect this dynamic, underscoring the gardens’ role as restorative landscapes where attention fatigue can be alleviated. This pattern also aligns with the findings of Zutter and Stoltz (2023) [40], who observed that older adults identified community gardens as spaces of peace and continuity, particularly valuable in the aftermath of stressful life events or broader social disruptions. Moreover, the emotional benefits reported appear to derive not only from solitary activity but from the quality of the social environment. Several participants linked their psychological well-being to the relationships formed in the garden, with some referring to the site as a space of conviviality and mutual support. These descriptions are consistent with the evidence presented by Mejías Moreno (2013) and Dyg et al. (2019), who point to the role of urban gardens in combating loneliness, fostering community attachment, and promoting a shared sense of value and recognition [33, 39]. In this sense, psychological well-being cannot be disentangled from the social capital that gardens help to generate and sustain. Crucially, the perceived emotional benefits were often described in contrast to the sedentary and isolating routines associated with retirement or widowhood. Participants noted how gardening structures their day, offers a meaningful activity, and allows them to feel useful—elements also highlighted by Wen et al. (2018) and Jo et al. (2022) as essential to preserving a sense of identity and creativity in later life [41,37]. Urban gardens, thus, serve both as therapeutic environments and as sites of agency and self-definition for the elderly.

The findings also confirm that urban gardens serve as crucial social infrastructures that facilitate informal learning, social engagement, and personal meaning-making in later life. Across the interviews, participants described the garden as a space where knowledge is acquired through practice and also generously shared, creating a dynamic ecosystem of intergenerational exchange. These results align with Wen, Albert, and Von Haaren (2018), who argue that gardening fosters creativity, identity, and participation, particularly when older adults build their own environments and engage in shared cultivation tasks [41]. The data highlight that older gardeners often see themselves as custodians of traditional agricultural knowledge, acquired through family transmission, observation, and iterative trial and error. Many expressed a strong willingness to transmit this knowledge, especially to younger generations, which reinforces the findings of Mejías Moreno (2013), who reported that urban gardens in Spain function as spaces of social cohesion and collective learning [33]. This pedagogical commitment appears deeply rooted in a sense of purpose and social utility, contributing to self-esteem and delaying the social disengagement often associated with old age [40].

In parallel, the results underscore the role of the garden as a generator of affective bonds and emotional support networks. Interactions among peers—sharing tasks, offering advice, or simply enjoying each other’s presence—reflect a form of social capital often overlooked in urban design.

These insights are in line with the literature by Guo, Yanai, and Xu (2024), who observed that community gardens contribute significantly to neighbourhood cohesion and psychological well-being, particularly among seniors living alone [38]. As in Dyg et al. (2019), the garden emerges as a therapeutic environment where stress is alleviated not only through exposure to nature but also via informal peer support [39]. Concerning health promotion, the testimonies reinforce previous evidence on the physiological and emotional benefits of gardening [36,31]. Participants frequently described improvements in sleep quality, appetite, and mental clarity. Several rejected conventional gyms in favour of the garden, which they perceived as a functional, age-appropriate form of exercise that fosters autonomy. This aligns with Tharrey and Darmon (2021), who identify gardening as an activity that supports cardiovascular, muscular, and cognitive health while also mitigating the risk of dependency in older age [34]. While the health benefits are widely acknowledged, the results also reveal ambivalence regarding environmental quality. Although participants valued the air quality and tranquillity of the garden environment compared to the city, some questioned the actual healthfulness of the surroundings, citing pesticide use, pollution, and global ecological decline. These concerns suggest that even highly localised green interventions must be critically assessed within broader environmental frameworks. Nevertheless, the gardens remain perceived as therapeutic refuges from urban stress, echoing the findings of Hawkins et al. (2011) and Jo et al. (2022) on the restorative power of nature exposure [32,37].

#### *Study Limitations*

This study presents several limitations that should be acknowledged when interpreting its findings. As with most qualitative research, the analysis is not intended to yield statistically generalisable results, but rather to provide a situated and in-depth understanding of the meanings and practices associated with urban gardens in the context of active ageing. The sample was composed primarily of senior gardeners who had already developed a sustained relationship with their garden, which may have introduced a positive selection bias. Consequently, the views expressed may not reflect the experiences of individuals who discontinued participation, encountered barriers to entry, or developed critical perspectives on garden dynamics.

In addition, the interviews privileged the voices of older adults who actively engage in urban gardening and reported largely positive outcomes. While this provides valuable insight into the enabling potential of such spaces, the study does not incorporate the perspectives of older adults who may experience physical limitations, social discomfort, or difficulty accessing these environments. As highlighted in recent literature (Yuan & Chen, 2025), gardening can pose physical risks—such as joint strain or overexertion—if the activities are not adequately adapted to the needs of senior participants. These potentially exclusionary effects, often linked to a lack of ergonomic infrastructure or inclusive design, were not addressed in the present study.

These limitations suggest the need for future research that incorporates a broader spectrum of participant experiences, including those who are less engaged, marginalised or ambivalent towards urban gardening. Comparative studies across different types of urban gardens—varying by governance model, accessibility, or location—could also help to identify structural factors that either facilitate or inhibit inclusive ageing and community integration.

## 5. Conclusions

Population ageing and intensified urbanisation are global structural phenomena with significant social, health and environmental implications. An integrated approach is essential to design sustainable strategies that promote active ageing, understood as the optimisation of opportunities for health, participation and security in order to improve quality of life in old age. In this context, urban green infrastructure—and particularly urban gardens—are emerging as an effective tool for mitigating the negative effects associated with this demographic transition. The results obtained in this qualitative study confirm that regular (daily or weekly) participation in urban gardening activities generates significant benefits in multiple dimensions of older people's well-being. These

include increased physical activity, improved eating habits, strengthened social networks, reduced feelings of unwanted loneliness, and a general perception of well-being and personal satisfaction. Positive effects on physiological health, functional autonomy and emotional state are also observed, particularly in terms of reduced stress and anxiety. Consequently, urban planning geared towards the design and implementation of accessible and inclusive green spaces can play a key role in promoting environments that favour active ageing. The integration of these elements into urban public policies will not only contribute to the well-being of the ageing population, but will also strengthen the social and environmental resilience of contemporary cities.

**Author Contributions:** Conceptualization, N.F.-S. and N.F.-S., C.S.C. and A.G.-V.; methodology, N.F.-S. and A.G.-V.; analysis, N.F.-S. and C.S.-C.; discussion; N.F.-S., A.G.-V., C.S.-C. and J.G.-F.; writing of the manuscript, A.G.-V., C.S.-C. and J.G.-F.; critical review. All authors have read and agreed to the published version of the manuscript.

**Funding:** This study is a result of the U-GARDEN project (ref. 101003758) funded by MCIN/AEI/10.13039/501100011033 and the European Union “NextGenerationEU”/PRTR” in the framework of the Horizon 2020 ERA-NET Cofound Urban Transformation Capacities (ENUTC) call and also from funding received from the FPU (University Teacher Training) contract from the Spanish Ministry of Universities, reference FPU19/04167.

**Institutional Review Board Statement:** This study will be conducted in accordance with European and national guidelines and has received a statement of support based on a prior ethical review conducted by the Human Research Ethics Committee of the Experimental Research Ethics Committee of the University of Valencia, Application Reference 2024-SOCTUR-3769066 (13 October 2025).

**Informed Consent Statement:** Digital or paper informed consent is obtained from all subjects participating in the study.

**Data Availability Statement:** The data that support the findings of this study are available from the corresponding author upon reasonable request.

**Conflicts of Interest:** The authors declare no conflicts of interest.

## References

1. Harper, S. *How Population Change Will Transform Our World*; Oxford University Press: Oxford, Reino Unido, 2016.
2. Sánchez, V.; Arribas, J. Principales cambios demográficos mundiales y sus consecuencias. *Gac. Sind. Refl. Debate* **2022**, *39*, 245–260.
3. Eurostat. Population structure and ageing. *Statistics Explained 2024*. Available on: [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Population structure and ageing](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Population_structure_and_aging)
4. Eurostat. Population and population change statistics. *Statistics Explained 2024*. Available online: [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Population\\_and\\_population\\_change\\_statistics](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Population_and_population_change_statistics)
5. World Health Organization (WHO). *World Report on Ageing and Health*; WHO: Geneva, Switzerland, 2015. Available on: <https://www.who.int/publications/i/item/9789240694811>
6. Vetrano, D.L.; Palmer, K.; Marengoni, A.; Marzetti, E.; Lattanzio, F.; Roller-Wirnsberger, R.; Onder, G.; Joint Action ADVANTAGE WP4 Group. Frailty and multimorbidity: A systematic review and meta-analysis. *J. Gerontol. A Biol. Sci. Med. Sci.* **2019**, *74*(5), 659–666.
7. Instituto de Mayores y Servicios Sociales (IMSERSO). *Ageing in Spain: Report 2020*; IMSERSO: Madrid, España, 2020. Available on: <http://envejecimiento.csic.es/documentos/documentos/imserso-ageingspain-01.pdf>

8. Consejo Superior de Investigaciones Científicas (CSIC). *Envejecimiento Activo: Un Marco Político*; CSIC: Madrid, España, 2015. Available on: [http://envejecimiento.csic.es/documentos/documentos/Envejecimiento\\_Activo\\_2015\\_es.pdf](http://envejecimiento.csic.es/documentos/documentos/Envejecimiento_Activo_2015_es.pdf)
9. Eurostat. Ageing Europe – Statistics on Population Developments. *Statistics Explained*, 2024. Available on: [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Ageing\\_Europe\\_-\\_statistics\\_on\\_population\\_developments](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Ageing_Europe_-_statistics_on_population_developments)
10. Eurostat. Population Projections at Regional Level. *Statistics Explained*, 2024. Available on: [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Population\\_projections\\_at\\_regional\\_level](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Population_projections_at_regional_level)
11. Eurostat. Mortality and Life Expectancy Statistics. *Statistics Explained*, 2024. Available on: [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Mortality\\_and\\_life\\_expectancy\\_statistics](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Mortality_and_life_expectancy_statistics)
12. Eurostat. Ageing Europe – Statistics on Health and Disability. *Statistics Explained*, 2024. Available on: [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Ageing\\_Europe\\_-\\_statistics\\_on\\_health\\_and\\_disability](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Ageing_Europe_-_statistics_on_health_and_disability)
13. OECD; European Observatory on Health Systems and Policies. *España: Perfil Sanitario Nacional 2023; State of Health in the EU*; OECD Publishing: París, Francia; European Observatory on Health Systems and Policies: Brussels, Belgium, 2023. Available on: [https://health.ec.europa.eu/system/files/2023-12/2023\\_chp\\_es\\_spanish\\_0.pdf](https://health.ec.europa.eu/system/files/2023-12/2023_chp_es_spanish_0.pdf) (acceso el 18 de abril de 2025).
14. Calvo, C.B.; Guerra, J.A.I.; Andrés, M.I.G.; Abella, V. Dependencia y edadismo. Implicaciones para el cuidado. *Rev. Enferm. CyL* 2009, 1(1), 46–52.
15. Tarazona-Santabalbina, F.J.; Martínez-Velilla, N.; Vidán, M.T.; García-Navarro, J.A. COVID-19, adulto mayor y edadismo: errores que nunca han de volver a ocurrir. *Rev. Esp. Geriatr. Gerontol.* 2020, 55(4), 191.
16. Sánchez Román, M. Edadismo y autoimagen entre las personas mayores en España: una aproximación cualitativa desde la perspectiva de género; Tesis de maestría, Universidad Complutense de Madrid: España, 2021.
17. Baltar, A.L. Edadismo: consecuencias de los estereotipos, del prejuicio y la discriminación en la atención a las personas mayores. Algunas pautas para la intervención. *Inf. Portal Mayores* 2004, 14, 1–12.
18. Duran-Badillo, T.; Miranda-Posadas, C.; Cruz-Barrera, L.G.; Martínez-Aguilar, M.; Gutiérrez-Sánchez, G.; Aguilar-Hernández, R.M. Estereotipos negativos sobre la vejez en estudiantes universitarios de enfermería. *Rev. Enferm. Inst. Mex. Seguro Soc.* 2016, 24(3), 205–209.
19. Foster, L.; Walker, A. Active and successful aging: A European policy perspective. *Gerontologist* 2015, 55(1), 83–90.
20. 20Mendizábal, M.R.L. Envejecimiento activo: un cambio de paradigma sobre el envejecimiento y la vejez. *Aula Abierta* 2018, 47(1), 45–54.
21. Kirilov, I.; Atzeni, M.; Perra, A.; Moro, D.; Carta, M.G. Active aging and elderly's quality of life: Comparing the impact on literature of projects funded by the European Union and USA. *Clin. Pract. Epidemiol. Ment. Health* 2018, 14, 1.
22. Iantzi-Vicente, S. El Envejecimiento Activo y Saludable: Una revisión sistemática de la literatura científica del ámbito social. *Res. Ageing Soc. Policy* 2024, 12(2), 127–145.
23. Organización Mundial de la Salud (OMS). 2020. *Decenio del Envejecimiento Saludable 2021–2030*. Disponible en: <https://www.who.int/es/initiatives/decade-of-healthy-ageing>
24. World Health Organization (WHO). *Global Age-Friendly Cities: A Guide*; WHO: Geneva, Switzerland, 2007. Available on: <https://apps.who.int/iris/handle/10665/43755>
25. Rodríguez-Rodríguez, V.; Rojo-Pérez, F.; Fernández-Mayoralas, G.; Pérez de Arenaza Escribano, C. Qualitative Research on Diagnoses and Plans of Age-Friendly Cities and Communities: A Global View of the Spanish Network. Executive Report; Instituto de Mayores y Servicios Sociales (Imserso): Madrid, Spain, 2024. Available on:

[https://imserso.es/documents/20123/0/informe\\_estudio\\_ccaa\\_infoeje\\_ingles\\_20240405.pdf/36248a81-d9da-a3c1-b5fe-c55bf16c2113](https://imserso.es/documents/20123/0/informe_estudio_ccaa_infoeje_ingles_20240405.pdf/36248a81-d9da-a3c1-b5fe-c55bf16c2113)

- 26. Rémillard-Boilard, S.; Buffel, T.; Phillipson, C. Developing Age-Friendly Cities and Communities: Eleven Case Studies from around the World. *Int. J. Environ. Res. Public Health* **2021**, *18*, 133.
- 27. Van Hoof, J.; Marston, H.R. Age-friendly cities and communities: State of the art and future perspectives. *Int. J. Environ. Res. Public Health* **2021**, *18*(4), 1644.
- 28. Alley, D.; Liebig, P.; Pynoos, J.; Banerjee, T.; Choi, I.H. Creating elder-friendly communities: Preparations for an aging society. *J. Gerontol. Soc. Work* **2007**, *49*(1–2), 1–18.
- 29. Fitzgerald, K.G.; Caro, F.G. An overview of age-friendly cities and communities around the world. *J. Aging Soc. Policy* **2014**, *26*(1–2), 1–18.
- 30. Xu, T.; Nordin, N.A.; Aini, A.M. Urban green space and subjective well-being of older people: A systematic literature review. *Int. J. Environ. Res. Public Health* **2022**, *19*(21), 14227. <https://doi.org/10.3390/ijerph192114227>
- 31. Yuan, F.; Chen, M. A systematic review of measurement tools and senior engagement in urban nature: Health benefits and behavioral patterns analysis. *Health Place* **2025**, *91*, 103410. <https://doi.org/10.1016/j.healthplace.2024.103410>
- 32. Hawkins, J.L.; Thirlaway, K.J.; Backx, K.; Clayton, D.A. Allotment gardening and other leisure activities for stress reduction and healthy aging. *HortTechnology* **2011**, *21*(5), 577–585. <https://doi.org/10.21273/HORTTECH.21.5.577>
- 33. Mejías Moreno, A.I. Contribución de los huertos urbanos a la salud. *Hábitat Soc.* **2013**, *(6)*, 85–103. <https://doi.org/10.12795/HabitatSociedad.2013.i6.05>
- 34. Tharrey, M.; Darmon, N. Urban collective garden participation and health: A systematic literature review of potential benefits for free-living adults. *Nutr. Rev.* **2021**, *00*(0), 1–16. <https://doi.org/10.1093/nutrit/nuaa147>
- 35. Hawkins, J.L.; Mercer, J.; Thirlaway, K.J.; Clayton, D.A. "Doing" gardening and "being" at the allotment site: Exploring the benefits of allotment gardening for stress reduction and healthy aging. *Ecopsychology* **2013**, *5*(2), 110–125. <https://doi.org/10.1089/eco.2012.0084>
- 36. Detweiler, M.B.; Sharma, T.; Detweiler, J.G.; Murphy, P.F.; Lane, S.; Carman, J.; Chudhary, A.S.; Halling, M.H.; Kim, K.Y. What is the evidence to support the use of therapeutic gardens for the elderly? *Psychiatry Investig.* **2012**, *9*(2), 100–110. <https://doi.org/10.4306/pi.2012.9.2.100>
- 37. Jo, J.-H.; Shin, S.; Son, Y.-G.; An, B.-C. Seniors' participation in gardening improves nature relatedness, psychological well-being, and pro-environmental behavioral intentions. *J. People Plants Environ.* **2022**, *25*(3), 297–309. <https://doi.org/10.11628/ksppe.2022.25.3.297>
- 38. Guo, J.; Yanai, S.; Xu, G. Community gardens and psychological well-being among older people in elderly housing with care services: The role of the social environment. *J. Environ. Psychol.* **2024**, *94*, 102232. <https://doi.org/10.1016/j.jenvp.2024.102232>
- 39. Dyg, P.M.; Christensen, S.; Peterson, C.J. Community gardens and wellbeing amongst vulnerable populations: A thematic review. *Health Promot. Int.* **2019**, *34*, 1–14. <https://doi.org/10.1093/heapro/daz067>
- 40. Zutter, C.; Stoltz, A. Community gardens and urban agriculture: Healthy environment/healthy citizens. *Int. J. Ment. Health Nurs.* **2023**, *32*(6), 1452–1461. <https://doi.org/10.1111/inm.13149>
- 41. Wen, C.; Albert, C.; von Haaren, C. The elderly in green spaces: Exploring requirements and preferences concerning nature-based recreation. *Sustain. Cities Soc.* **2018**, *38*, 582–593. <https://doi.org/10.1016/j.scs.2018.01.023>
- 42. Cattivelli, V. The urban gardens in South Tyrol (IT): Spatial distribution and some considerations about their role on mitigating the effects of ageing and urbanization. *Reg. Stud. Reg. Sci.* **2020**, *7*(1), 206–209. <https://doi.org/10.1080/21681376.2020.1770121>
- 43. Comité Econòmic i Social de la Comunitat Valenciana (CES-CV). Estructura Demográfica en la Comunitat Valenciana. Memoria sobre la Situación Socioeconómica y Laboral de la Comunitat

Valenciana 2020; CES-CV: Valencia, España, 2021. Disponible en línea: [https://www.ces.gva.es/sites/default/files/2021-09/13\\_2020.pdf](https://www.ces.gva.es/sites/default/files/2021-09/13_2020.pdf)

44. Instituto Nacional de Estadística (INE). Proporción de personas mayores de cierta edad por comunidad autónoma. Indicadores Demográficos Básicos. Disponible en línea: <https://www.ine.es/jaxiT3/Datos.htm?t=1451>

45. 45Montero, L. P. (2016). Bancos del Tiempo y Huertos Urbanos como herramientas para el Trabajo Social en la intervención gerontológica. *Documentos de trabajo social: Revista de trabajo y acción social*, (57), 19-37.

46. Blasco-Sánchez, C.; Martínez-Pérez, F.J. Huertos urbanos, infraestructura verde y urbanismo: una relación histórica con capacidad renovadora. *Ciudad Territ. Estud. Territ.* **2025**, 57(223).

47. Generalitat Valenciana. El Consell aprueba el decreto ley por el que se modifica la Ley de la Huerta de València y el Plan de Acción Territorial de Ordenación y Dinamización. *Comunica GVA*, 4 de febrero de 2025. <https://comunica.gva.es/es/detalle?id=389734309&site=373428693>

48. Díaz-Bravo, L.; Torruco-García, U.; Martínez-Hernández, M.; Varela-Ruiz, M. La entrevista, recurso flexible y dinámico. *Invest. Educ. Méd.* **2013**, 2(7), 162-167.

49. Braun, V.; Clarke, V. Using thematic analysis in psychology. *Qual. Res. Psychol.* **2006**, 3(2), 77-101.

50. Instituto Nacional de Estadística (INE). Valencia/València: Población por municipios y sexo. Cifras oficiales de población resultantes de la revisión del Padrón municipal a 1 de enero de 2023; INE: Madrid, España, 2023. Disponible en: <https://www.ine.es/jaxiT3/Tabla.htm?t=2903>

51. Instituto Nacional de Estadística (INE). Población por sexo, municipios y edad (grupos quinquenales). Estadística del Padrón Continuo. Disponible en línea: <https://www.ine.es/jaxiT3/Datos.htm?t=33944>

52. Mwita, K. Factors influencing data saturation in qualitative studies. *Int. J. Res. Bus. Soc. Sci.* **2022**, 11(4), 414-420.

53. Tight, M. Saturation: An overworked and misunderstood concept? *Qual. Inq.* **2024**, 30(7), 577-583.

54. Mannan, S.; Afni, M. *Best Practices of Semi-Structured Interview Method*; Chittagong Port Authority: Chittagong, Bangladés, **2020**; pp. 1-12.

55. Adams, W.C. Conducting semi-structured interviews. In *Handbook of Practical Program Evaluation*, 4th ed.; Newcomer, K.E.; Hatry, H.P.; Wholey, J.S., Eds.; Jossey-Bass: San Francisco, CA, EE. UU., **2015**; pp. 492-505.

56. Friese, S. *Qualitative Data Analysis with ATLAS.ti*; SAGE Publications: Londres, Reino Unido, 2019.

57. Scott, T.L.; Masser, B.M.; Pachana, N.A. Exploring the health and wellbeing benefits of gardening for older adults. *Ageing Soc.* **2015**, 35(10), 2176-2200.

58. Litt, J.S.; Alaimo, K.; Harrall, K.K.; Hamman, R.F.; Hébert, J.R.; Hurley, T.G.; Glueck, D.H.; et al. Effects of a community gardening intervention on diet, physical activity, and anthropometry outcomes in the USA (CAPS): An observer-blind, randomised controlled trial. *Lancet Planet. Health* **2023**, 7(1), e23-e32.

59. Gray, T.; Tracey, D.; Truong, S.; Ward, K. Community gardens as local learning environments in social housing contexts: Participant perceptions of enhanced wellbeing and community connection. *Local Environ.* **2022**, 27(5), 570-585.

60. Garcia, M.T.; Ribeiro, S.M.; Germani, A.C.C.G.; Bóguis, C.M. The impact of urban gardens on adequate and healthy food: A systematic review. *Public Health Nutr.*

61. Palar, K.; Hufstedler, E.L.; Hernandez, K.; Chang, A.; Ferguson, L.; Lozano, R.; Weiser, S.D. Nutrition and health improvements after participation in an urban home garden program. *J. Nutr. Educ. Behav.* **2019**, *51*(9), 1037–1046.
62. Kaplan, S. The restorative benefits of nature: Toward an integrative framework. *J. Environ. Psychol.* **1995**, *15*(3), 169–182.

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