

a cura di / edited by
Maria De Santis, Luca Marzi,
Simone Secchi, Nicoletta Setola

SPECIE DI SPAZI

Promuovere il benessere
psico-fisico attraverso il progetto

SPECIES OF SPACES

Fostering psycho-physical
well-being by design

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I volumi inseriti in questa collana sono soggetti a procedura di double blind peer review.

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SPECIE DI SPAZI / SPECIES OF SPACES

Promuovere il benessere psico-fisico attraverso il progetto / Fostering psycho-physical well-being by design

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ISBN 979-12-5953-052-3 (print)

ISBN 979-12-5953-089-9 (digital - open access)

ISSN 2704-906X

Prima edizione novembre 2023 / First edition November 2023

Editore / Publisher

Anteferma Edizioni S.r.l.

via Asolo 12, Conegliano, TV

edizioni@anteferma.it

Layout grafico / Graphic design Margherita Ferrari

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Il volume è stato realizzato dal Cluster Accessibilità Ambientale della Società Italiana della Tecnologia dell'Architettura con il patrocinio del Dipartimento di Architettura dell'Università degli Studi di Firenze, dell'Istituto Nazionale di Urbanistica e dell'Istituto per l'innovazione e trasparenza degli appalti e la compatibilità ambientale (ITACA).

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Age-friendly Public Spaces: How to Properly Assess them to Improve their Quality

Spazi pubblici age-friendly: come valutarli adeguatamente per migliorarne la qualità

Secondo le Nazioni Unite, entro il 2050 il numero di persone con più di 65 anni raggiungerà quota 1,5 miliardi in tutto il mondo e al contempo i contesti urbanizzati avranno più abitanti (UN, 2019c). Di conseguenza, sempre più anziani vivranno nelle città, motivo per cui l'invecchiamento della popolazione dovrebbe essere visto come un'opportunità al fine di assicurare benessere e inclusione sociale per le persone di tutte le età.

La coorte anziana è molto eterogenea, con abitudini e necessità differenti ma avente generalmente lo stesso desiderio di age in place. Ma a qual è il luogo ideale in cui invecchiare e quali caratteristiche ha?

Guardando agli spazi pubblici del quartiere, dove gli anziani trascorrono la maggior parte del loro tempo (Buffel et al., 2012), il presente paper sottolinea la necessità di una loro corretta valutazione per migliorarne la qualità e garantire un invecchiamento sano e attivo. Pertanto, è necessario stabilire quali siano le caratteristiche chiave degli spazi urbani secondo un manuale, una guida o uno strumento valutativo che, ad oggi, manca (Dellamora et al., 2015). Infatti, gli strumenti esistenti presentano molti limiti nella loro applicazione e difficilmente forniscono una valutazione obiettiva.

Viene qui proposta una revisione della letteratura per aiutare a identificare criticità e potenzialità di tali strumenti, al fine di costruirne uno nuovo grazie al quale sia possibile analizzare in maniera adeguata gli spazi pubblici di quartiere, visto come il luogo migliore in cui poter invecchiare bene.

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Introduction

The world population is growing fast and the number of people over-65 is rising consequently, with significant differences between low-middle-income countries and high-income ones both in terms of figures and opportunities (UN, 2019a).

These demographic projections require a structural policy reflection to face this challenge consciously, guaranteeing social inclusion, health and well-being within people's living environment. According to the United Nations, population ageing has direct influences on countries' development processes along with population growth, international migration and urbanization, which are the four demographic megatrends (UN, 2019b). For this reason, countries need "to plan for population ageing and ensure the wellbeing of older persons by protecting their human rights and economic security and by ensuring access to age-appropriate health care services, lifelong learning opportunities, and formal and informal support networks" (UN, 2019b, p. 37).

It is also important because a huge number of elderly live in the cities. If almost 68% of the global population will live in urbanized contexts by 2050 (UN, 2019c), even the number of people over-65 there will increase proportionally. Therefore, a new domain, called urban ageing¹, emerges in social and health science with implications even for other disciplines, such as urban planning and architecture (van Hoof *et al.*, 2018).

The present paper aims to give an overview of the existent studies on urban ageing in high-income countries and assessment tools on the topic to understand how to act to guarantee healthy and active ageing.

About age-friendly cities and communities

The population ageing issue emerged in the 1950s. In the same period, the first retirement communities were created in the USA as a solution to the phenomenon. Some years later the American urbanist Lewis Mumford, in opposition to this trend, stated that "to normalize old age, we must restore the old to the community" (Mumford, 1956, p. 192).

Segregation is not the right way to age well: people need to stay active in their communities, with familiars, friends, and neighbours. Nonetheless, the "familiar place" is not always the right place where to grow old, especially when we talk about cities and urbanized contexts, where social conflicts and physical barriers could exist.

Generally, cities offer more opportunities and services to citizens than rural areas so they may be the best place to age in place, but they also need continuous and deep processes of regeneration and adaptation to the inhabitants' needs to be more inclusive and sustainable (van Hoof and Kazak, 2018). For this reason, in the early 2000s, the World Health Organization (WHO) introduced the idea of age-friendly cities intending to guarantee well-being as people age.

Age-friendly cities can be realized thanks to the elderly's intention to stay as long as possible in their own house and in their neighbourhood, where they feel they belong, known as ageing in place (Scharlach and Lehning, 2016).

Ensuring ageing in place means offering enabling spaces to older people since the context in which people are and act affects their behaviour² (Lawton, 1982). The physical and social environments and the behaviour of the person are shaped in a dynamic and constantly evolving process. If we look at the built environment in particular, the lack of specific characteristics can exacerbate the vulnerability of the elderly, which is differently altered by a biological decline (Lawton, 1974). Therefore, ageing in place and age-friendly actions are strongly connected.

1 It deals specifically "with the population of older people living in cities" (van Hoof *et al.*, 2018, p. 1).

2 Which is related to Lawton's person-environment fit theory.

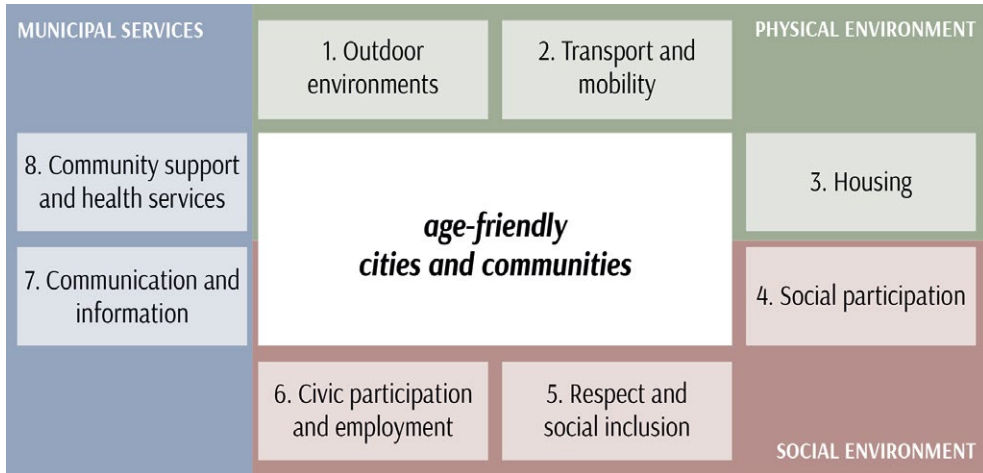


Fig.01 Definition of the 8 domains and 3 macro-areas of AFCCs.

Age-friendly cities are defined as “places that actively involve, value, and support older adults, both active and frail, with infrastructure and services that effectively accommodate their changing needs” (Alley *et al.*, 2007, p. 4). Introduced in the 2007 WHO publication *Global Age-friendly Cities: a Guide* (below: guide), age-friendly cities can be better described thanks to 8 domains, which are: i) outdoor spaces and buildings; ii) transportation; iii) housing; iv) social participation; v) respect and social inclusion; vi) civic participation and employment; vii) communication and information; viii) community support and health services.

It is possible to distinguish some domains that deal more with physical aspects such as mobility, safety, or accessibility (i; ii; iii), and others more with the social ones, like culture, social participation, mental health (iv; v; vi), and finally the latter are more concerned with medical aspects (vii; viii) (Fig. 01).

After a decade, experts and researchers extend the definition of age-friendly cities – and so their main features – to the communities too. To date, we talk about age-friendly cities and communities (AFCCs) since the community, both the neighbourhood and the neighbours, is fundamental in the everyday life of elderlies. Environmental gerontology underlines its value because “community is the best scale to implement the core concept of ageing in place, especially in the developed countries where planning techniques tend to apply more at the neighbourhood levels” (Chao, 2018, p. 40).

However, how is possible to understand which are the real necessities of the elderly in the neighbourhoods? And how to improve the quality of public space to promote health and well-being?

Existent tools to assess age-friendliness

Evaluating a place objectively to assess its strengths and weaknesses can lead to improving its characteristics. In this sense, the age-friendliness assessment of a neighbourhood can lead to the construction of healthy and pleasant places where to grow old. Nevertheless, to date, there is no optimal tool for the evaluation of age-friendliness, considered as the ability of the community to encourage and support ageing through pleasant physical and social environments (Dellamora *et al.*, 2015).

The first limit for the construction of a valid tool or guide is related to the nature of age-friendliness itself. In fact, it is defined as “a complex, dynamic and multi-dimensional concept which is also highly context-dependent. [...] Thus, it does not easily lend itself to standardization of measurement” (WHO EU, 2017, p. 65). Despite this, standardization is necessary to com-

pare and define a set of common objectives useful for complex urban processes (Kano *et al.*, 2018).

Some internationally known tools aiming at assessing AFCCs features exist, even though they present limitations in application. The most known ones have all been edited by the WHO at different times, as we see below:

- Checklist of essential features of age-friendly cities (below: checklist) (WHO, 2007b);
- Measuring the age-friendliness of cities. A guide to use core indicators (below: core-indicators) (WHO, 2015);
- Age-friendly environments in Europe. A handbook of domains for policy action (below: AFEE) (WHO EU, 2017).

According to Buckner *et al.* (2019), one of the most important challenges of evaluating and promoting age-friendly actions is to identify an objective approach able to summarize the complexity of the topic and be applied to various contexts.

Instead, the existent tools are mostly based on a qualitative approach, which should be part of the assessment process but as an addition to match with quantitative analysis. In fact, issues like mobility, services, quality of indoor and outdoor spaces, and so on, need to be evaluated objectively, with indicators or guidelines to determine the success or the possible failure of the set goals (WHO, 2018). The necessity to develop indicators for measuring the ageing population's impact on society is stated even in the New Urban Agenda (UN-Habitat, 2017).

A description of the existent tools will follow to underline how they work and which are their main limitations in use.

Checklist of essential features of age-friendly cities

The checklist is the result of the consultation of the 33 cities in 22 world countries which were involved in the early stages of the age-friendly initiatives (WHO, 2007a). It aims to conveniently present the characteristics and actions to create age-friendly environments.

The checklist is divided into 8 sections, corresponding to the 8 domains of the guide. Each section has a various number of items for a total of 84. It looks like a list whose items can be checked if they reflect what is described. For example, in the case of “Outdoor spaces and buildings” the item “Public areas are clean and pleasant” can be ticked off if the feedback from the elderly is positive. Although, how is it possible to measure the pleasantness of a place? How to distinguish the most pleasant areas from the less pleasant ones unremarkably?

The lack of objectivity is one of the tool's main limitations in use. For this reason, further research has been done by the WHO and other tools have been edited.

Measuring the age-friendliness of cities. A guide to use core-indicators

In 2015 the WHO published a guide for the evaluation of the age-friendliness of a city using core-indicators. These indicators synthetically describe complex phenomena, making them measurable and meant to be implementable and editable in different contexts over time, if necessary.

As for the checklist, the core-indicators have been developed thanks to the participation of 40 communities in 15 world countries and even specialists.

Specifically, in the document, the WHO distinguishes 5 kinds of indicators, for a total of 23: equity; input; output; outcome; impact. Apart from the equity indicators, the others relate differently to interventions and policies and their impact in terms of quality of life (WHO, 2015).

An indicator consists of a synthetic definition, a more in-depth definition, and some comments and references on the topic. Although, there are no benchmarks to establish their effectiveness concerning the set goals and no specific methods to evaluate the single item. Both a qualitative approach and a quantitative one are proposed for the same indicator, which means that users can choose the first approach or the second arbitrarily.

The proposed framework appears far more detailed than the checklist, but it is not yet universally useful to evaluate age-friendliness.

Age-friendly environments in Europe. A handbook of domains for policy action

In 2017, the WHO European office drafts a manual to implement the work carried out by the WHO globally. The handbook is designed for policy makers to create supportive environments aimed to encourage healthy and active ageing. It has three main goals: to increase knowledge and awareness of the subject; to summarize (for the local authorities) the main phases and processes for an increasingly age-friendly environment; to make suggestions on the needed indicators to monitor age-friendly projects (WHO EU, 2017).

As stated, it is not an assessment tool actually, rather it can be defined as a manual of “good practices” divided into the 8 domains of AFCCs and in 3 transversal macro-scopes (supportive physical environments, participatory and inclusive social environments, municipal and local government services). In addition, an action area (comparable to a criterion) and its targets are identified for each domain.

The AFEE handbook is a fundamental reference to elaborate good strategies aimed at measuring age-friendliness at the urban scale. The detected action areas and the objectives show the importance of their cross-functionality. They are well-structured, enough to be standardized to create new indicators.

A new tool to improve the age-friendliness of public spaces

Based on the findings of the presented analyses, a new tool for evaluating age-friendliness at the neighbourhood scale focusing on the urban public space and its physical and social aspects has been built by the author³.

As seen before, urban features can influence elderly people’s behaviour and consequently their use of urban public spaces. The social and physical characteristics of the environment where people live or stay directly affect their health and physical well-being (Buffel *et al.*, 2012) since the ageing process is a result of the person’s organic modification combined with the complex interaction between the surroundings and the person himself.

This is the reason why focusing on these characteristics should be a priority for policy makers, designers and stakeholders and in this sense measuring age-friendliness as objectively as possible could allow them to identify existing problems and understand how to act to improve these spaces.

The existent tools by the WHO present two main limits: the scale of analysis and the loose structure.

In the first case, the city scale is too vast and diverse to get a realistic overview of the entire situation concerning elderlies’ quality of life. A new tool has to be applied at the neighbourhood scale, seen as the place where the elderly people spend most of their time and where the sense of place and the will to age in place increase (Buffel *et al.*, 2012).

The second limit refers to the tools’ structure, thus their flexibility and the lack of an objective method of evaluation. Having references about indicators and criteria is fundamental to build a new and more effective tool. In this sense, the analysis of the most common neighbourhood sustainability assessment tools’ specificities could be useful, looking in particular at spatial and social dimensions of sustainability⁴ (Revellini, 2023).

3 The work is part of the doctoral research carried out by the author at Università Iuav di Venezia (2019-2022). This research is still going on thanks to the work in the iNEST ecosystem - interconnected Nord-Est Innovation, Spoke 4, financed by Italian PNRR (Mission 4 Component 2 Investment 1.5).

4 The analysed tools were: GBC Italia Quartieri (IT); ITACA Scala Urbana (IT); BREEAM Communities (UK); Living Community Challenge (USA); EcoDistricts (USA); DGNB Districts (Germany).




SECTION	CRITERION
 1. PUBLIC SPACE QUALITY	1.01 Squares and courtyards
	1.02 Green areas
	1.03 Urban gardens
	1.04 Blue areas
	1.05 Urban furniture
 2. MOBILITY AND TRANSPORT	2.01 Pedestrian paths
	2.02 Cycle paths
	2.03 Public transports
	2.04 Car parking
 3. SERVICES AND COMMUNITY	3.01 Neighbourhood services
	3.02 Community and participation
	3.03 Ground floor
	3.04 Urban security



Fig.02 About SMARTAGING: the three areas and related criteria, 2022.

Fig.03 A bench in one of the green areas in Santa Marta neighbourhood (Venice): elderly people can rest and enjoy time in a pleasant environment. Servizio fotografico e immagini luav, 2021

Based on these considerations, the new tool named SMARTAGING has been written⁵. It has a simple structure made up of 3 sections – reinterpreting 7 out of 8 domains of AFCCs, non-considering the “housing” domain – 13 criteria and 40 indicators (Fig. 02).

Specific goals and indicators are given for each criterion. In particular, indicators consist of statements describing a given status quo (e.g. “Public spaces are characterized by...”). The fact that a specified condition exists, or does not, determines the allocation of the score. The details about the calculation and the scoring are present in the criterion-related appendix.

Each indicator has the same weight (2,5% point) but there is no benchmarking. This choice is motivated by the intention to avoid a subjectification of the assessment and to have a simple measuring system.

The highest reachable score (110%) considers the possibility of an additional point, defined plus, in the case of 5 indicators when specific exemplary performances occur (for the plus the point is equal to 2%).

It is possible to distinguish different levels of age-friendliness:

- under 50%, poor;
- from 50% to 70%, acceptable;
- from 70% to 85%, good;
- from 85 to 100%, very good;
- from 100 to 110%, outstanding.

5 A deeper description of the research phases is available in the paper *SMARTAGING in Venice. Toward a definition of age-friendly neighbourhood* written by the author in 2022.



Fig.04 Urban playgrounds in Santa Marta neighbourhood (Venice) where the elderly spend their time with nephews, familiars and friends. Servizio fotografico e immagini luav, 2020

The tool has been tested in the case of two neighbourhoods, Santa Marta in Venice and Chiafris in Udine. Other tests are needed, even though it appears simple to use and to give the score. Nevertheless, a panel of interdisciplinary experts should be involved to contribute to a better re-adjustment of the indicators. Moreover, the tests also show the necessity to combine a qualitative tool (e.g. a questionnaire) to involve elderly people and know about their real needs and feelings.

To date, the SMARTAGING tool has a lot of potential to become a widely used tool for neighbourhood age-friendliness assessment in urban areas and a good starting point for future developments on the subject, so that the neighbourhood can become an enabling place for the elderly.

Conclusions

Population ageing is a pervasive phenomenon that has already significant impact on the sustainable development of nations, and it will continue to do so in the near future. Cities can potentially be places of opportunity thanks to their services and activities, but on the other hand, they can become hindering for the elderly cohort because of their dimension and qualities. Over the years, as a consequence of the age-friendly initiatives, various aspects that can promote healthy and active ageing have been identified, also thanks to the WHO guide.

Following the WHO's work on the topic, the present paper focuses on age-friendliness assessment tools, since standardization is a good way to compare and define common objectives (Kano *et al.*, 2018) useful for complex urban processes. According to the literature review (Delamora *et al.*, 2015; Buckner *et al.*, 2019), to date there is no valid tool to evaluate age-friendly cities. For this reason, one of the most actual challenges to evaluating and promoting age-friendly actions is to identify an objective approach able to summarize the complexity of the topic and be applied to various contexts (Buckner *et al.*, 2019).

SMARTAGING, the new tool here briefly described, tries to do so with its simple and linear structure taking into account the neighbourhood as the smaller urban scale to be analysed. The tool still has some limits, but it proposes to change the approach to age-friendliness assessment underlining the importance of the role of public space in elderly life.

Further research has to be done considering even other issues not yet covered (e.g. economic conditions, multiculturalism, technology, climate changes) to create inclusive, supportive, enabling and safe places and societies for all ages.

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Il volume affronta il tema del benessere psico-fisico promuovendo l'inclusione nel progetto degli spazi e presentando i risultati di studi, ricerche e sperimentazioni progettuali, raccolti in occasione del convegno dal titolo *Specie di Spazi*, organizzato a Firenze il 20 novembre 2023. Il progetto che ha reso possibile questa antologia strutturata di esperienze nasce dalla volontà dei componenti del Cluster Accessibilità Ambientale della Società Italiana della Tecnologia dell'Architettura (SITdA) di continuare il percorso di costruzione di un modello di riferimento scientifico interdisciplinare per una progettazione responsabile, declinata alle diverse scale, sempre più mirata alle persone e alla complessità dei diversi bisogni inseriti nell'ampio contesto della tutela e della promozione dei diritti umani.

This book addresses the theme of psycho-physical well-being by promoting inclusion in the design of spaces and presenting the results of studies, research, and design experimentations collected at the Conference entitled *Species of Spaces*, organised in Florence on 20th November 2023. This structured anthology of experiences stems from the desire of the members of the Environmental Accessibility Cluster of the Italian Society of Architecture Technology (SITdA). The project aims to continue constructing an interdisciplinary scientific reference model for responsible design, declining at different scales, increasingly focusing on people and the complexity of the various needs in the broad context of protecting and promoting human rights.

ISBN 979-12-5953-052-3



Anteferma Edizioni € 32,00