QUARTIERI SANI HUB: HEALTHY AND INCLUSIVE NEIGHBORHOODS FOR THE COMMUNITIES OF THE METROPOLITAN CITY OF FLORENCE

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Abstract

As recognised in the scientific literature, the topic of healthy cities needs to be addressed at the neighbourhood scale, as health has a place-based dimension. The contribution is based on the Quartieri Sani Hub (Healthy Neighbourhoods Hub) ongoing research, aiming to investigate the issue of health and wellbeing through an integrated approach based on spatial and social knowledge, in order to define strategies and design scenarios for an inclusive and healthy neighborhood.

The paper presents the methodological approach defined within this research project for merging different aspects of the healthy city, leading to the definition of a transdisciplinary and multi-scalar conceptual framework in which the characteristics of the built environment that promote healthy lifestyles are systemised.

Keywords: healthy cities, healthy neighbourhoods, primary care facilities, urban design, design for inclusion

1   Introduction

The research "Healthy and Inclusive Neighborhoods for the Communities of the Metropolitan City of Florence: Strategies and Design Scenarios for a Healthy City of proximity, and for Active Ageing of the Population (Healthy Neighborhood Quartieri Sani Hub)" fits into the theoretical framework of healthy city issues and aims to investigate and analyze at the neighborhood scale what characteristics a neighborhood should have to promote healthy lifestyles. In this needs, it matches with the model of the 15 minutes city, by providing create visions and projects with stakeholders and interested parties, institutions and citizens aiming at putting HoH at the center of the neighborhood.

Financed by the "Researchers in Florence (Ricercatori a Firenze)" programme of the Florence Bank Foundation (Cassa di Risparmio di Firenze), the project involves an interdisciplinary team at the

Department of Architecture (DIDA) of the University of Florence, including disciplines from urban planning and landscape architecture to architectural technology and industrial design, and a partnership composed of public and private subjects: the Metropolitan City of Florence, the Municipality of Florence, the Florence Health Society (Società della Salute), the Center-Tuscany Health Agency (Azienda USL Toscana Centro), the Metalco Group[1]

The Italian House of ealth (HoH) is also a subject of this study, in their evolving towards the House of the Community (HoC). Introduced by Ministerial Decree 77 of 23 May 2022, HoCs aim to strengthen and develop territorial healthcare assistance in the National Health System by implementing new organizational models and redefining the functions and coordination of both existing and newly managed structures.

The Decree distinguishes two organizational models for the House of the Community: hub Houses of the Community and spoke Houses of the Community. The first are the reference structures, targeted for every 40,000-50,000 inhabitants, and will articulate their action in a capillary way in a territory through the Spoke HoH .

Within this new conception, HoH can become the node of a proximity network that, in addition to the traditional function of providing health services, takes on the functions of a center of aggregation providing social services for the neighborhood.

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The project aims to answer the following research questions:

● What potential does the public space of a neighborhood offer in terms of health promotion, and in particular for active ageing for the population?

● How can spaces close to the HH be strengthened in terms of usability, health promotion, support for social and health services?

● What tools and methodologies can support the institutions involved in promoting health and care within the city?

2. Theoretical framework

The environment in which a community lives, the dimensions and determinants of the built environment, as well as the presence of different levels of naturalness, condition individual health and social networks (Barton & Grant, 2006). The interrelationship between public health, urban planning, architecture, landscape architecture, and the design of systems, products, and services plays a relevant

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[1] Cf: https://sites.google.com/unifi.it/quartierisanihub - last access 7 june 2023

role in increasing and promoting health, including the dimensions of mental health, social inclusion, and participation (WHO&UN Habitat, 2016). The World Health Organization and the United Nations support the need to make cities and places of living "inclusive, safe, resilient, and sustainable" (SDG 11), pointing to "access to safe housing, creation of public green spaces, and improved urban design through participatory and inclusive methodologies," among other elements. Thus, the focus is not only on innovative health care models, but also on integrated spatial approaches for creating health in neighborhoods, by connecting different actors and organizing public space to answer to the needs of the community. Three decades ago, WHO launched the Healthy cities initiative network which, by collecting good practices, highlights how a place/environment-based approach to health is increasingly needed today to achieve healthy and resilient cities. This was followed by a series of initiatives and research that led to the development of Urban Health as a first step for integrated health within urban policies to make cities healthy (WHO-UNHabitat, 2020) up to the challenge of the One Health approach (WHO, 2020).

At the national level, this approach is declined with the reform for the formation of the new institutional and systemic organization constituted by the Health-Environment-Climate Network (SNPS) (Agenas, 2021), which provides, among others, actions to response to health needs in critical environmental circumstances, through a citizen proximity approach; actions with high synergy with other institutions/sectors [...]; support to urban planning for healthier, safer, resilient, more inclusive, sustainable environments; promotion of choices oriented to natural environments, green and blue infrastructures.

Literature shows evidence of how the built environment affects public health and in particular chronic diseases (Perdue et al., 2003; Lee et al., 2012) as it acts on healthy lifestyles (physical activity, healthy diet, positive social interactions) which, in turn, help to prevent chronic diseases (cardiovascular, diabetes, some cancers) (Sallis et al., 2012; Nykiforuk et al., 2012).

Already in the Ottawa Charter (1986) "Create supportive environments for health" was listed as a priority action. The 9th Global Conference on Health Promotion in Shanghai (2016) identified the neighbourhood and its community as the dimension in which health should be addressed "Health is created in the settings of everyday life - in the neighbourhoods and communities where people live, love, work, shop and play" and that health is one of the drivers for achieving sustainable development and contributes to inclusive, healthy and resilient cities.

At the same time, the changed scenarios of the post-pandemic present new challenges and offer new opportunities within this context.

The SARS-CoV-2 pandemic has evidenced the role of the city as important planning arenas for the provision of basic needs, the organization of daily life, and the safeguarding of a resilient economic base in case of direct physical issues affecting health, such as a spreading disease. It has also underlined the importance of public spaces and social networks for human health in everyday life. In particular, neighborhood public spaces can play a role as "places of escape" in a progressive hegemony of virtual spaces. In general terms, urban planning and design are asked to generate wellbeing.

This call for wellbeing represents a great challenge, for both health care systems and municipalities and regions. Health care systems must reorganize their architectures in order to become promoters of healthy aging and to respond to new social and health needs of the population. Institution at all levels (municipalities, districts, regions) should involve in spatial planning and design practices oriented to a

conception of our cities and urban environments as creators of health and well-being and as important factors in the development of healthy aging for the population (Grant et al., 2017), taking the neighborhood as a starting point.

3. The approach

In order to provide a framework to guide choices and intervention strategies for spatial planning and design within the healthy city, the research faces with several topics:

- attention to the local dimension: the research is set in two neighbourhoods of the city of Florence, one in the centre and one in the suburbs, both along the Arno river;

- multi-actor involvement in the definition of an inclusive and healthy neighbourhood: through participatory and co-design processes, the research involves stakeholders mediating between different scales and views, from public administrations (Municipality of Florence; AUSL Toscana Centro; Società della Salute), to third sector entities, SMEs, and citizens;

- consideration of primary care facilities as drivers for the health promotion in the neighbourhood: the research considers the neighbourhood and its Casa della Salute (House of Health)as a unique ecosystem;

- the need for a multi-scalar approach: the research combines the principles, guidelines for healthy cities and neighbourhoods, such as those of WHO and other government bodies, by spatialising them to a local dimension up to the definition of measurable spatial variables, mediating between scales (regional, urban, architecture, design scale);

- importance of addressing the issue with the help of several disciplines: architecture design, urban planning, landscape design, product and service design disciplines are represented in the research group.

For holding together all these dimensions, the literature review has taken as reference theories to the four areas that characterize its approach, conceiving:

i) the perception and usability of urban space: Space Syntax (Hillier, 2007), legibility and figurability of the urban image (Lynch, 1960), Walkability (Lo, 2009; Ewing R. & Handy S., 2009);

ii) the built environment as a factor for promoting health: Evidence Based Design (Ulrich et al., 2008), Biophilic Design (Salingaros, 2015), Health Promoting Building (Srivastava, 2021);

(iii) spaces, products/furnishings and services as elements capable of increasing citizen engagement and pushing towards healthy and active behaviour patterns: Nudge Design Thinking (Thaler & Sunstein, 2014), Human-centred Design (HCD) (ISO 9241:210, 2019; Maguire, 2001), Inclusive Design (Clarkson et al., 2007, 2013), Service Design Thinking (Stickdorn et al., 2018);

(iv) strategic planning and design and visioning as drivers of innovation in urban space, its accessories and services: Urban Design (Pisano, 2023), Regional Design (Neuman & Zonneveld, 2018; Balz, 2019; Lingua & Balz, 2020).

The literature review, by focusing on the healthy city, ageing of population and proximity domains, has led to define a methodological framework, tested on two case study concerning Hub HoH within the metropolitan city of Florence. Within these cases, the transition from a HoH to a HoC is approached

in an integrated and interdisciplinary way, in which the Department of Architecture of the University of Florence has been a referent for the Florentine Health Society, the City and the Metropolitan City of Florence. Within the frame of the research project "Quartieri sani HUB", the Department of Architecture has provided to define a method of analysis and design for the neighborhood functions and public spaces within the city of Florence, related to health and well-being. This method has been defined by a process of co-design involving communities in both the design of public spaces and furniture and the construction of links and relations with and between institutions.

4. Conclusion

The action research activity concerns the Municipality of Florence and has as its focus of investigation two HoH identified in agreement with the municipal administration and the Società della Salute di Firenze: HoH Santa Rosa; HoH Le Piagge. The analysis phase of the case study started with the review of the regional metropolitan and municipal planning; the investigations then focused on the identification of the dynamics of proximity and the presence of green areas and public spaces at the scale of the Metropolitan City of Florence and at the scale of the Municipality of Florence.

The research activity moved on two parallel levels: the on-site observation of the built environment for cartographic elaboration and the direct engagement with stakeholders. An interdisciplinary survey of the area has been conducted using the conceptual framework as a guide to intercept and observe the different elements of the built environment. Subsequently, an Open-Source map was produced for defining and localizing the areas, spaces and buildings that concur to define renewal issues. Seven thematic maps were defined for each neighborhood.

The engagement phase was divided into several stages and involved, with different participative methods, tools and at different times, several stakeholders identified in the stakeholder map. Stakeholders belonging to institutions, health homes and associations in the area concerned with healthy lifestyles were involved with semi-structured interviews. Innovative tools such as card sorting were also used here, in order to make interviewed give priorities among different renewal issues. Employees of the HH were also involved through itinerant Healthy Labs.

Citizens were instead involved in participative moments organized in the two districts with Open Space Labs and co-planning activities. The summary results of all these activities were analyzed and, together with the findings of the surveys, defined an overall picture of the neighborhood's potential and criticalities, again according to the conceptual framework of the seven themes for drawing up a health map of the current situation in the neighborhood. Moreover, a future health map provides design ideas to enhance the healthy issues into the neighborhood, by integrated actions connecting the HoH with the surroundings and networking it with the community, both at the physical and social level.

The theoretical framework defined within the Healthy Neighborhood Hub research project has provided a useful frame of reference for both analyzing and designing public spaces and functions in order to promote health within the neighborhood, in particular for active ageing for the population and for all targets: in general, the neighborhood design and equipment can provide health for the whole community.

The on-site situated occasions to involve the institutional stakeholders and the citizens have proved that these tools can support the institutions involved in promoting health and care within the city, by

providing useful directions to take into account while designing a new structure or regenerating existing structures and their connected spaces.

Conflict of Interest

Funding

References

Agenas (2021), Piano nazionale di ripresa e resilienza Missione salute, Monitor n. 45/2021. - Balz, V. (2019). Regional Design: Discretionary Approaches to Planning in the Netherlands. - Barton, H., & Tsourou, C. (2013). *Healthy urban planning*. Routledge.

Balz, V.E. (2019), *Regional Design.* A+BE: Delft, The Netherlands

Barton, H., & Grant, M. (2006). A health map for the local human habitat. *Journal of the Royal Society for the Promotion of Health*, *126*(6), 252-252.

Clarkson, P. J., Coleman, R., Hosking, I., & Waller, S. (2007). *Inclusive design toolkit*. Engineering Design Centre, University of Cambridge, UK.

Clarkson, P. J., Coleman, R., Keates, S., & Lebbon, C. (2013). Inclusive design: Design for the whole population.

Ewing, R., & Handy, S. (2009). Measuring the unmeasurable: Urban design qualities related to walkability. *Journal of Urban design*, *14*(1), 65-84.

Grant, M., Brown, C., Caiaffa, W.T., Capon, A., Corburn, J., Coutts, C., Crespo, C.J., Ellis, G., Ferguson, G., Fudge, C. & Ward Thompson, C. (2017). Cities and health: an evolving global conversation.

Hillier, B. (2007). *Space is the machine*. Cambridge University Press.

ISO 9241-210 (2019), *Ergonomics of human-system interaction* — Part 210: Human-centred design for interactive systems.

Lee, I. M., Shiroma, E. J., Lobelo, F., Puska, P., Blair, S. N., Katzmarzyk, P. T., & Lancet Physical Activity Series Working Group (2012). Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. *The lancet*, *380*(9838), 219- 229.

Lo, R. H. (2009). Walkability: what is it?. *Journal of Urbanism*, *2*(2), 145-166. - Lopez, R. (2004). Urban sprawl and risk for being overweight or obese. *American journal of public health*, *94*(9), 1574-1579.

Lynch, K. (1960). The image of the city MIT Press. *Cambridge MA*, 208.

Maguire, M. (2001). Methods to support human-centred design. *International journal of human computer studies*, *55*(4), 587-634.

Neuman M., Zonneveld W. (2018), The resurgence of regional design, *European Planning Studies,* 26(7):1297-1311.

Nykiforuk, C.I., Schopflocher, D., Vallianatos, H., Spence, J.C., Raine, K.D., Plotnikoff, R.C., Vanspronsen, E. & Nieuwendyk, L. (2013). Community Health and the Built Environment: examining place in a Canadian chronic disease prevention project. *Health promotion international*, *28*(2), 257- 268.

Perdue, W. C., Stone, L. A., & Gostin, L. O. (2003). The built environment and its relationship to the public's health: the legal framework. *American journal of public health*, *93*(9), 1390-1394. - Peters, T. (2017). Superarchitecture: Building for better health. *Architectural Design*, *87*(2), 24-31. - Pisano, C. (2020). Strategies for post-COVID cities: An insight to Paris En Commun and Milano 2020. *Sustainability*, *12*(15), 5883.

Pisano C., Zaccariotto G. (2023). *Urbanistic Projects. Next generational paths: A European Perspective.* Macerata: Quodlibet. Studio Città e paesaggio - Saggi, ISBN:978-88-229-2133-8

Salingaros, N. A. (2015). Biophilia and healing environments. *Healthy principles for designing the built world. ed. Metropolis magazine e Terrapin Bright-Green, New York.*

Sallis et al. 2012. The Role of Built Environments in Physical Activity. Circulation. 125(5), 729–737 - Setola, N., & Borgianni, S. (2016). *Designing public spaces in hospitals*. Routledge. - Sharpe, H., Rogers, Y., & Preece, J. (2007). Interaction design: beyond human-computer interaction 2nd ed.

Srivastava, C. (2021). *Research Anthology of Health-Promoting Building Strategies*, U.S. Green Building Council.

Stickdorn, M., Hormess, M. E., Lawrence, A., & Schneider, J. (2018). *This is service design doing: applying service design thinking in the real world*. " O'Reilly Media, Inc.".

Thaler, R., & Sunstein, C. R. (2014). *Nudge. La spinta gentile: La nuova strategia per migliorare le nostre decisioni su denaro, salute, felicità*. Feltrinelli Editore.

Ulrich, R.S., Zimring, C., Zhu, X., DuBose, J., Seo, H.B., Choi, Y.S., Quan, X. & Joseph, A. (2008). A review of the research literature on evidence-based healthcare design. *HERD: Health Environments Research & Design Journal*, *1*(3), 61-125.

World Health Organization & UN-Habitat. (2016). *Global report on urban health: equitable healthier cities for sustainable development*. World Health Organization.

World Health Organization (2020). *WHO global strategy on health, environment and climate change: the transformation needed to improve lives and wellbeing sustainably through healthy environments.* World Health Organization.