Health City Management

Prospettive sostenibili innovative per l'architettura e lo spazio urbano

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Sommario

Introducendo l'importanza del benessere umano all'interno dello spazio fisico, sia urbano che architettonico, dalla dimensione domestica a quella lavorativa, questo articolo illustra un lavoro di ricerca, ancora in progress, volto a definire strategie sostenibili per promuovere politiche per la salute nel contesto urbano, attraverso la partecipazione attiva dei cittadini, con una interpretazione territoriale dal punto di vista architettonico, urbano e sanitario. Emerge il bisogno di un lavoro interdisciplinare tra medici, psicologi, architetti, progettisti e tutti coloro che gestiscono lo sviluppo della città. Il risultato del lavoro è quello di definire le competenze di una nuova figura professionale che sappia coniugare le esigenze di sviluppo della città e la garanzia della salute, nel contesto delle *healthy cities*.

Parole chiave

Healthy city, Architettura, Spazio urbano, Gestione dello spazio urbano, Manager della sicurezza, Well-being management, Psicologia della sostenibilità e dello sviluppo sostenibile.

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Innovative Sustainable Perspectives in Architecture and Urban Space

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Abstract

Introducing the importance of human well-being within both the urban and architectural physical space, from the domestic to the working dimension, this paper illustrates a research project, which is still in progress, aimed at defining sustainable strategies to promote policies for health in the urban context, through the active participation of citizens, with a territorial interpretation from an architectural, urban and health point of view. The need for interdisciplinary work between doctors, psychologists, architects, planners, and all those who manage the development of the city has arisen. The result of the project is to define the skills of a new professional figure capable of combining the needs of city development and the safeguarding of health, in the context of *healthy cities*.

Keywords

Healthy city, Architecture, Urban space, Urban planning management, Safety manager, Well-being management, Psychology of sustainability and sustainable development.

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Introduction

The concept of well-being, in particular the relationship between the well-being of the individual and the development of the community, implies a process of interaction and mutual influence between individual and collective well-being, such that individual happiness is achieved within the social space.

The concept of a society's well-being and therefore of health does not simply refer to physical survival or the absence of disease, but includes psychological aspects; natural, environmental, climatic and housing conditions; and working, economic, social and cultural life — as defined by the World Health Organization (World Health Organization [WHO], 2015).

One of the main objectives of contemporary society is to improve the health and physical and psychological well-being of people living in urban spaces and contexts, attributing to architecture a fundamental role in achieving this aim, in terms of design and strategies through development of «Healthy Cities» (De Leeuw et al., 2017), a project promoted by the World Health Organization.

The design of architectural and urban spaces must be in line with the well-being of those who live there, in particular environments and buildings that must be defined in such a way as to adapt to different users and different needs that may change over time; the main goal is that designers promote well-being through the creation of a physical environment that is also attentive to the psychological aspect.

The need has arisen for a vision capable of reconstructing a fruitful reconnection between health, urban planning and architectural design, in line with current evidence and research on sustainable development and environmental sustainability (Santi & Leporelli, 2019; Leporelli et al., 2018a, 2018b). In this context, the contribution of the psychology of sustainability and sustainable development (Di Fabio, 2017a, 2017b; Di Fabio & Rosen, 2018) to the well-being of organizations from the point of view of primary prevention opens up new scenarios and areas of research for designers, in terms not only of the ecological, economic and social environment, but also of the improvement of the quality of life of every human being. The psychology of sustainability and sustainable development (Di Fabio, 2017a, 2017b; Di Fabio & Rosen, 2018) is seen as a primary prevention perspective that can foster well-being in organizations and in society at all different levels and also in inter-organizational and social processes.

The application of these concepts is possible thanks to the closely connected relationship between architecture and psychology, according to which, human beings are influenced by the urban and architectural context in which they find themselves, from the city in which they live, to their home, right up to their work place (Wölfflin, 2010). In fact, it is known that most people spend their days indoors, often in sedentary occupations. For many, actions such as climbing

stairs or getting up from a desk to use office equipment, even for short distances, are the most accessible and cost-effective way of participating in some form of regular physical activity over long periods of inactivity.

For this reason, planners must pay particular attention to key points and support accessibility for individuals of all levels of mobility.

- The design of the building circulation system, consisting of interior spaces, corridors, stairways, elevators, and corridors that connect the planned spaces of a building. Stairs and ramps must be designed with attention to the principles of universal accessibility.
- The design of individual building elements, such as stairs, gyms, bathrooms with showers, bicycle storage, and squares. The design of these elements can favour or discourage activity through traffic, convenience, opportunity, safety and comfort. Providing services such as drinking fountains and benches can further support physical activity. Conversely, elements such as unnecessary escalators, an excess of elevators, obstacles such as closed doors, non-ergonomic design and poor positioning of construction elements can discourage physical activity.
- A careful organization of the project to encourage walking between two different destinations. Building dwellers can practice this through regular trips to the post-box or by going to the coffee shop or their workplace.
- The provision and design of spaces scheduled for activities, including gyms, swimming pools, athletics tracks, multipurpose halls and other specialized spaces designated as venues for physical activity.

In addition to these targeted active design strategies related to the internal elements of the building, the volume and external design of the structure can also encourage physical activity by contributing to the creation of a viable street environment (Leporelli & Santi, 2019; Santi el al., 2019, 2020). Although research on the relationship between facade design and physical activity is limited, practical experience suggests that buildings that incorporate human-scale elements, more entrances, transparencies, canopies, external stairways, porches and terraces can encourage greater physical activity. The creation of cities and active buildings, therefore, also takes place through an approach set within the framework of the psychology of sustainability and sustainable development (Di Fabio, 2017a, 2017b; Di Fabio & Rosen, 2018); hence, the main objectives of the design guarantee benefits, not only for public health, but also for the environment and for global design (European Commission, 2010).

One of the main difficulties will be that of being able to understand and translate all the needs and requirements that the different social groups present into a project. Social relations, which are fundamental for the design of an environment to live in, require, first of all, good-quality common spaces. Therefore, immedi-

ate interventions are necessary in urban areas, such as green areas, pedestrian areas, sports centres and squares. Urban complexes must encourage exchanges between people within the same city or neighbourhood. A neighbourhood almost entirely occupied by private places, with few public spaces where one can socialize, which is degraded, overcrowded or deserted, is very limiting for social relations. What you need to aim for is to build something that provides a sense of accomplishment, shared values and belonging, and this goal is achieved through the creation of well-designed and organized public spaces. WHO analysed the situation in order to highlight the problems of today's society: health, drinking water, food, urban transport, land use, exposure to noise, air pollution, climate change, social environment and social services (Komiyama et al., 2011), and recommended some actions to have a better city.

- Designing urban health and safety strategies by improving road safety, promoting physical activity and good nutrition and basic sanitation for all.
- Improving urban living conditions by acting on pollution and hygiene with the guarantee of drinking water for everyone and ensuring homes in safe places.
- Allowing active participation in urban policy by encouraging dialogue between institutions and citizens, thus disseminating basic information.
- Building inclusive cities that can accommodate everyone by making urban transport accessible with safe pavements and routes and by creating public areas for physical activity.
- Creating urban areas resilient to both natural and human emergencies and disasters by placing health facilities in safe and resilient places, strengthening operational responses to disasters and preventing and controlling the spread of diseases.

This project consists in the implementation of global strategies adopted locally to protect the health of inhabitants and sustainable development, through a process of political commitment, institutional change, capacity building and planning for the achievement of common objectives and innovative projects.

Making cities sustainable means creating career and business opportunities (Department of Design and Construction, Department of Health and Mental Hygiene, Department of Transportation, and Department of City Planning, 2010), safe and affordable housing, and building resilient societies and economies; it implies investments in public transport, the creation of green public spaces and the improvement of urban planning and management in a participatory and inclusive way through the use of tools such as urban design, spatial connections, parks, road networks, cycle tracks and pedestrian paths, and trying to integrate physical activity into everyday life.

Designers play a key role in the rapid growth of epidemics, obesity and related chronic diseases, especially in light of the growing scientific evidence demonstrating the impact of environmental design on physical activity and healthy

eating. By adopting design strategies, architects and planners can contribute to significantly improving the health and well-being of the population.

Recent research has shown that diversified land use and a good, well-developed, public road network tend to increase physical activity among city residents and create opportunities for active recreation that are more accessible to children and their families, through the organization and location of parks, playgrounds and squares (Rosen, 2009).

Planners can promote greater access to healthy foods through the provision and positioning of food markets. Measures for the design of safe roads can encourage walking and cycling among the young and the old, through the development of safe, lively and accessible routes. Many of these active design strategies will improve not only the health and well-being of the population, but also the environment, as they stimulate people to walk and cycle and to drive less. Furthermore, in order to achieve these objectives, the articulated and complex interdisciplinary work of many professional figures is necessary, including doctors, psychologists, architects, planners, and all those who manage the development of the city, with a view to sustainable development, this enables collective well-being in the context of every social space.

Today, in fact, we are moving more and more towards the design of healthy cities, designed and built to improve the quality of life and well-being of all people: by those who live, work and grow up in them and all those who come into contact with them, where each person is free to make choices based on quality of health, resources, opportunities and economic convenience. All this makes these cities the most liveable and sustainable ones. They are the result of a well-defined economic and commercial policy aimed at implementing the needs and requirements of citizens.

The health city manager

The collaboration of all figures involved, with, in addition, the need for a strong alliance between bodies such as municipalities, universities, health centres, research centres, companies and professionals to study and monitor the determinants of citizens' health, have suggested at the same time the creation of the figure of *health city manager*, capable of guiding the process of improving health in urban areas in synergy with local and health administrations.

During their training, *health city managers* must have acquired transversal and interdisciplinary knowledge in:

– promotion of health and well-being, prevention, through the adoption of correct lifestyles, of communicable and non-communicable diseases typical of urban areas, in synergy and collaboration with the authorities in charge of public health and prevention, as well as with the local health professions;

- assessment of the social and psychological impact of urban life on the quality of life of citizens, with specific attention to situations of greater fragility and to the weakest categories of the population in order to obtain an improvement;
- the architecture of the city, urban planning and territorial planning, both in terms of the functionality of city areas and the activation and coordination of participation processes, together with the ability to read, integrate and coordinate plans aimed at local governance and transformation of contexts;
- capacity for political-administrative dialogue at various institutional levels, respecting reciprocal prerogatives, and for interaction with informal/horizontal levels for city management;
- management of relations for the finalization and measurement of public policies implemented according to timing and criteria suitable for the replicability and scalability of the project.

The health city manager must acquire professional competences in public health management, sociology and psychosociology of communities, urban architecture and control in the reduction of social and health inequalities.

Conclusion

The role of the Health City Manager is the product of a broader reflection process initiated by the Health City Institute think tank on the main themes of its investigations, namely health in cities and the impact of urbanization on the determinants of health.

What clearly emerges from this consideration is the need to adopt a new interpretative paradigm, which takes into account a multidisciplinary approach and the need to achieve complete involvement at the level of local institutions, represented by Administrations and Health Units.

These institutions can have a more rapid and profound impact on the quality and lifestyles of citizens through public policies geared towards the objectives to be achieved. New welfare and social-service models should therefore be identified and promoted within the culture of local administration. All institutional and decision-making levels need to develop a deeper awareness of the urgency required by the issue of health and well-being in urban areas.

In order for this to happen, the Health City Institute, in collaboration with EUPHA-Urban Health and WFPHA, has identified the Health City Manager as the most appropriate profile to guide cities towards a «City of Health» model, helping to increase skills in collaboration with administrative authorities to develop innovative and inclusive solutions to meet the health and well-being demands of citizens.

Table 1

Health City Manager: Design for all/Universal design.

Health City Manager	Design for all / Universal design
Urban health and policies	• Involving citizens in choices according to the «health in all policies» approach. • Involving local administrations in promoting the health of citizens by studying and monitoring the specific health determinants of their urban context, leveraging the strengths of cities and drastically reducing health risks. • Promoting public-private partnerships for the implementation of policies and consequent strategic actions.
Social inclusion	• Adopting policies aimed at improving social, economic and environmental conditions, with interventions aimed at improving the urban context of reference. • Aligning the city with the highest standards of accessibility and usability of urban and design services, identifying the different types of disabilities, and identifying Inclusive / Universal Design strategies for the accessibility of the city's open spaces to different categories of users. • Promoting economic and social measures aimed at improving the inclusion, integration and social aggregation of all categories of the population. • Promoting prevention and social and health inclusion policies for migrant populations through the cooperation of cultural mediators as well.
Health data monitoring	• Creating control booths for the study and monitoring of the impact of health determinants in the urban context, arranging for the joint involvement of municipal administrations, health authorities, universities and research centres. • Promoting multi-stakeholder partnerships for urban policies, which, based on studies on the impact of health determinants in cities, can create «smart» interventions aimed at reducing health risks and promoting a healthy and inclusive urban environment. • Creating a permanent conference of Hospitals of Metropolitan Areas, delegating significant competences and decision-making powers in terms of planning and provision of hospital health services. • Interacting with the bodies of the European Union and the WHO to carry out targeted projects and attract resources.

Table 2

Health City Manager: Health promotion and protection.

Health City Manager	Health promotion and protection
Literacy and accessibility to information and health education, including in schools	• Promoting training courses at regional or local levels for social and health workers, health professions and patient associations. • Allowing citizens, patients and their associations to communicate easily and promptly with the health system. • Promoting and consolidating collaboration between health, education and local communities.
Food and nutritional culture	• Outlining guidelines that take into account the different contexts and different targets of the population (appropriate school menus and/or menu companies). • Organizing informative events and food education projects in the area (health gardens, zero waste).
Access to practical sport and physical activity for all citizens	• Guaranteeing all citizens free access to infrastructures and green spaces, with particular attention to those struggling, according to the principle of «Sports Citizenship» and daily physical activity in urban travel (home-work/school). • Envisaging new ways to protect solidarity between generations, improving the inclusion of the elderly in cities and promoting active aging. • Encouraging sport and physical activity for children and young people in order to tackle the phenomenon of adolescent abandonment, even through the active involvement of families.
Health promotion and chronic disease prevention	• Promoting informative programmes on prevention to integrate diagnostic-therapeutic-assistance programmes for chronic communicable diseases and chronic communicable and non-communicable diseases between municipal administrations, in collaboration with the ASL. • Activating study projects in the most suitable urban contexts to bring citizens closer over the course of their daily activities (health centres, workplaces, recreational places, sports facilities, and virtual places such as reference websites of the administrations themselves) in which to convey — through paper or virtual material — the key messages for prevention, involving municipal administrations and health authorities.

Table 3
Health City Manager: The green city.

Health City Manager	The green city
Urban transport oriented towards slow and sustainable transport and active transport according to a viable city model	• Encouraging the use of sustainable means of transport, through the creation of safe and well-connected walking and cycling routes, as well as an efficient local public transport system. • Providing public awareness activities towards more efficient and intermodal urban mobility choices, with parking and shared transport structures, as well as choices in favour of active transport. • Encouraging the adoption of SUMP, air quality monitoring plans, noise zoning and other planning tools.
Urban, architectural and planning strategies aimed at promoting and protecting health	• Disseminating best practices for the promotion of health in the workplace and strengthening the incentive system for companies that invest in safety and prevention. • Carrying out projects in large communities, involving families. • Counteracting the phenomena of urban sprawl (Cutini, 2016), through actions to regenerate and rebuild parts of abandoned cities, and those regarding land consumption and the attractiveness of historic centres. • Creating a social and functional mix on a macro scale (aggregated in a clustering logic) and micro scale (street level, attractiveness of neighbourhoods) according to the identification of Healthy Destinations. • Implementing all possible greening strategies of the city, managing adverse weather events, protecting and increasing urban biodiversity, and identifying the environmental, social and psycho-perceptive elements of green and blue areas, with particular reference to actions of urban regeneration. • Countering the phenomenon of climate change, identifying urban resilience strategies for reducing environmental and health effects on different scales. • Managing municipal solid waste according to intelligent collection systems aimed at improving the hygienic conditions of the urban context and the aesthetic appeal of the spaces.

This is a professional profile, which has also been endorsed at a European level, following the own-initiative opinion «Health in cities: a common good», adopted by the EU Committee of the Regions (May 2017) and positive feedback from the European Commissioner for Health at the III Health City Forum in Rome (July 2018).

The Salute City Institute, together with the project partners EUPHA (European Union Public Health Association — Urban Public Health Section) and ANCI (National Association of Italian Municipalities), has therefore, based on this, designed the learning profile of the Health City Manager and created a related training course.

The goal is to train a professional competent in public health management, in urban sociology and community psychosociology, and in urban architecture so they are therefore equipped with the skills to operate to reduce social and health inequalities.

For this purpose, the methodology, which led to the development of the basic curriculum of the Health City Manager, implies the participation of highly experienced experts in each area of expertise and the sharing of a multidisciplinary approach that allows us to achieve the most satisfactory and complete result possible.

The Health City Manager integrates perfectly with their political and technical colleagues, who may be on the PA staff, as their primary task will be to calculate and describe the impact on the health and well-being of citizens of each resolution, transversally, making it explicit and clear to policy makers and field operators.

The periodic coordination and monitoring of the actions put into play is a main objective to be achieved through meetings from large to small scale, including external opportunities to present them to the public in such a way that the community understands and gains awareness.

Thanks to the specific skills in the management of health projects, the plans that may end up being adopted by municipalities (for example the SUMP, Traffic Plans, Neutral Climate Plans, and PEBA — in other words plans to eliminate architectural barriers, urban planning strategies, AI applications or data sharing plans) converge in a shared common vision to build a «city of health». The contribution and added value provided by this figure can improve the relations and performance of local administrations with local health units by reconciling and in some ways overcoming the historically very deep separation in Italy between social and health sectors.

The Health City Manager considers health not as an «individual good» but as a «common good», which calls all citizens to the observance of ethics and the rules of civil coexistence, and to virtuous behaviour based on mutual respect. The common good is therefore an objective to be pursued by both citizens, mayors and local administrators, who must be guarantors of fair health by ensuring that the health of the community is considered an investment and not just a cost.

Bibliography

Cutini V. (2016), *La forma del disordine, Tecniche di analisi e progetto urbano ai tempi dello sprawl*. Milano: Mimesis Edizioni.

De Leeuw, E., Tsouros, A. D., Dyakova, M., & Green, G. (2017). *Healthy Cities. Promoting Health and Equity-Evidence for Local Policy and Practice*. Copenhagen, Denmark: WHO (World Health Organization, Urban Green Space Interventions and Health) Regional Office for Europe.

Di Fabio, A. (2017a). Positive Healthy Organizations: Promoting well-being, meaningfulness, and sustainability in organizations. *Frontiers in Psychology. Organizational Psychology*, *8*, 1938. doi: 10.3389/fpsyg.2017.01938

Di Fabio, A. (2017b). The psychology of sustainability and sustainable development for well-being in organizations. *Frontiers in Psychology. Organizational Psychology*, *8*, 1534. doi: 10.3389/fpsyg.2017.01534

Di Fabio, A., & Rosen, M. A. (2018). Opening the Black Box of Psychological Processes in the Science of Sustainable Development: A New Frontier. *European Journal of Sustainable Development Research*, *2*(4), 47. doi: 10.20897/ejosdr/3933.

European Commission. (2010). *Making our cities attractive and sustainable. How the EU Contributes to Improving the Urban Environment*. Luxembourg, Belgium: Publications Office of the European Union.

Komiyama, H., Takeuchi, K., Shiroyama, H., Mino, T. (2011). *Sustainability Science: A Multidisciplinary Approach*. Tokyo, Japan: United Nations University Press.

Leporelli, E., & Santi, G. (2019). From Psychology of Sustainability to Sustainability of Urban Spaces: Promoting a Primary Prevention Approach for Well-Being in the Healthy City Designing. A Waterfront Case Study in Livorno. *Sustainability, 11*(3), *760*. doi: 10.3390/su11030760

Leporelli, E., Santi, G., & Di Sivo, M. (2018a). Health, well-being and a sustainably built environment: From the new research area of psychology of sustainability and sustainable development to innovation in architectural research. *Counseling. Giornale Italiano di Ricerca e Applicazioni, 11*(3). doi: 10.14605/CS1131803

Leporelli, E., Santi, G., & Di Sivo, M. (2018b). The sustainability of urban spaces for healthier societies. Counseling. *Counseling. Giornale Italiano di Ricerca e Applicazioni*, 11(3). doi: 10.14605/CS1131806.

New York city Department of Design and Construction, Deparment of Health and Mental Hygiene, Department of Transportation, & Department of City Planning. (2010). *Active Design Guidelines: Promoting Physical Activity and Health in Design*. Retrieved 17 June, 2021, from https://centerforactivedesign.org/dl/guidelines.pdf.

Rosen, M. A. (2009). Sustainability: A crucial quest for humanity — Welcome to a new open access journal for a growing multidisciplinary community. *Sustainability*, *1*, 1-4. doi: 10.3390/su1010001

Santi, G., & Leporelli, E. (2019). Architectural space and psychology of sustainability: A new paradigm for living place design. *Counseling. Giornale Italiano di Ricerca e Applicazioni*, *12*(1). doi: 10.14605/CS1211901

Santi, G., Leporelli, E., & Di Sivo, M. (2019). Improving Sustainability in Architectural Research: Biopsychosocial Requirements in the Design of Urban Spaces. *Sustainability*, *11*(6), 1585. doi: 10.3390/su11061585

Santi, G., Bertolazzi, A., Leporelli, E., Turrini U., & Croatto, G. (2020). Green Systems Integrated to the Building Envelope: Strategies and Technical Solution for the Italian Case. *Sustainability*, *12*(11), 4615. doi: 10.3390/su12114615

World Health Organization (2015). *Physical activity strategy for the WHO European Region 2016–2025*. Copenhagen, Denmark: WHO Regional Office for Europe.

Wölfflin, H. (2010). *La Psicologia Dell'architettura* (Italian edition by D. Fornari & L. Scarpa). Milano: Et. al. Edizioni.