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Smart City and Well-Being: Opinions by the Guest Editors

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1. Background

As with technology, the concept of the Smart City has evolved over time in line with digitisation processes and the changing needs of cities and their inhabitants. Indeed, it was in the early 1980s when discussions first arose regarding the role that information technology would play in the development of conventional urban activities [1–3]. Some thirty years later, in 2009, the concept of the Smart City was first defined when, in Rio de Janeiro, a plan came into effect that employed technological innovation and waste management to improve the quality of life in the city by minimizing wastage [4]. This is a true evolution in which the vision of the traditional city is superseded by a more modern urban reality creating an ideal, highly automated ecosystem in which Information and Communication Technologies (ICT) take on the role of the core infrastructure of a Smart City [5–7].

The technological and techno-centric revolution, currently dictated by the market, may, however, result in a decrease in inclusivity and at the same time an increase in the digital divide. Moreover, a Smart City that is too heavily based on technological solutions runs the risk of becoming disconnected from policies with a real impact on urban contexts [8].

The term 'Smart City' encapsulates a conception of urban reality that transcends technological boundaries and aims to raise the standards of sustainability, liveability and economic dynamism of the cities of the future [9,10].

Although this paradigm of sustainability and efficiency has always been a major theme at all levels of governance, only recently has technology provided responsible parties with a wealth of opportunities that, when properly deployed, are remarkably effective [11,12].

Among these, advanced technologies related to artificial intelligence, cloud computing or IoT (Internet of Things), information system efficiency, the adoption of approaches characteristic of Industries 4.0 and 5.0, and e-health are described as promising proximal tools and strategies to promote health and well-being for the entire population [13–16]. In particular, mobile-health (m-health), defined as public healthcare practices supported by mobile devices, was widely used during the pandemic in order to ease the healthcare burden during the pandemic emergency [17–19]. In this respect, m-health tools have been used to monitor, for example, the lifestyles adopted during isolation (i.e., remote monitoring of physical activity, proper nutrition, self-medication, etc.) [15,20].

In the wake of these new understandings, and based on the merging of digitalisation with the concept of proximity, several cities worldwide are creating urban policies that clearly indicate an idea of sustainable and efficient growth [21]. In this manner the concept of a 'Smart City' is flanked by the adjective 'Human', to highlight the renewed centrality of the psycho-physical well-being of individuals in harmony with the environment in which they live [3,22].

The interplay between health, quality of life and the environment has become a central topic of interest for social, environmental and health sciences, and the relationship between

public health and urban planning also has a decisive role to play in fostering health-promoting lifestyles and environments [23–25]. In this regard, numerous findings show how the urban environment affects health on several levels, ranging from people's exposure to risk factors linked to an inadequate physical environment, to social changes affecting individual behaviour, to alterations in the biosphere and climate due to the significant ecological footprint of modern urban populations [26]. In this sense, the urban environment, also in light of the growing phenomenon of urbanisation, can have a positive impact on health but may also bring about health problems caused by air and noise pollution, traffic accidents, the adoption of unhealthy lifestyles and the spread of infectious agents in overcrowded conditions [27,28].

The pandemic and climate change have exacerbated an already precarious state of affairs in which the dynamics of urbanisation, production and distribution of goods clash with a scenario in which the relationship between urban spaces and services is often undermined to the detriment of maintaining health [29–31]. The lockdown adopted in response to the spread of the SARS-CoV-2 virus forced millions of people to spend 100% of their time indoors. This state of affairs, on the one hand, made it possible to stem the spread of the virus and, on the other, brought to light various problems inherent to housing conditions. Urban dwellings, often undersized compared to minimum housing standards, forced individuals to live in overcrowded conditions that sometimes resulted not only in physical but also psychological discomfort occasionally resulting in increased infections and severe health outcomes [32–36].

In addition to the above, exposure to indoor pollutants in living environments (domestic and working places) can lead to health problems, including irritation of the airways and mucous membranes, damage to the nervous system in children, as well as chronic diseases and neoplasms [37–39]. In this regard, the World Health Organisation estimates that indoor pollution alone is responsible for 2.7 per cent of the global burden of disease in the world, 4.6 per cent of deaths from all causes in Europe, and about 13 per cent of asthma in European children due to excessive dampness in buildings [40].

Of no less importance is the sustainable and safe management of drinking water and sanitation services, which are indispensable in order to avoid the possible contamination of the distribution network, guarantee a constant supply and limit growing consumption in living and care environments, in compliance with the latest safety and security regulations [41–43].

Water intended for human consumption is a cornerstone of healthy and salutogenic cities. In spite of this, industrialised countries and urban areas regularly fall short in providing drinking water to their citizens [44–49].

Moreover, with the recent easing of physical restrictions and distancing, and the gradual return to 'in-person' activities, citizens around the world have begun to re-experience cities in new ways, observing with greater interest the ease of access to services, the importance of green areas, the time spent commuting, and in general, the quality of the environment in which one lives [50–52].

With this in mind, strategic urban planning, with the improvement of road traffic, the redevelopment of run-down areas, the creation of green spaces, pedestrian and cycle paths, and safe home-school and home-work routes are among the main effective measures to reduce the impact that negative determinants can have on human health, as highlighted in the goals of the 2030 Agenda for Sustainable Development (SDGs—Sustainable Development Goals) promoted by the United Nations (UN) [53–55].

All of the above points to the need to apply a new concept of health to housing policy, both in terms of indoor and outdoor well-being. In the hope that the funding made available for digitisation and sustainability will be effectively directed towards overcoming the strong territorial disparities, there is no doubt that, in the wake of the pandemic, a response is now expected from the institutions on innovative policies that combine the indispensability of the digital transition with the renewed need for a better quality of life in all urban contexts. To this end, governments and administrators will be called upon to

ensure multilevel governance where institutions, businesses, civil society organisations and citizens can contribute to the design of an equitable and harmonious urban order.

2. Conclusions

Assuming that the Smart City movement can play a leading role in the protection and promotion of health, the Special Issue "Smart City and Well-Being" published in the journal *Urban Science* has the main objective of increasing the evidence and observations from the literature on (i) built environment and health, (ii) smart cities and well-being, and (iii) environmental and urban health. To this end, original articles, systematic reviews or meta-analyses, brief communications, comments or other types of articles dealing with the dependence between the morphological and functional organisation of the urban context and public health also with reference to different population cohorts (infants, adolescents, adults, the elderly, at-risk populations) were welcomed and encouraged for this Special Issue.

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