The Effective Role of Healthy Cities in Achieving Sustainable Urban Development

Yara Nabil, Amal Abdou, Ahmed Abdelghani

Assistant Lecturer, Department of Architecture, Faculty of Fine Arts, Helwan University, Egypt1
Professor of Architecture and Urban Design, Department of Architecture, Faculty of Fine Arts,
Helwan University, Egypt (2‹3)

Abstract

The article discusses the concept of healthy cities and their role in promoting health and well-being in urban areas, as well as social justice. Healthy cities are considered one of the fundamental indicators that support the Sustainable Development Goals and have become a policy supporting the developmental work of the WHO's Healthy Cities Project. In 2016, the World Health Organization declared that health is one of the most effective criteria for successful sustainable development. Overall, the article provides insight into strategies for creating healthier and more sustainable cities. The failure to implement urban health requirements and consider health determinants in decision-making tools is currently one of the enormous challenges, resulting in many problems that have led to the failure to promote public health requirements for users, negatively affecting the health and well-being of the community. Therefore, the article aims to deduce indicators of healthy city determinants, practices, and evaluations at several levels. To achieve this goal, the article's methodology relies on the theoretical narration of key terms related to healthy cities, their principles, and objectives. The article also explores the work of the WHO's Healthy Cities Project and includes an analysis of some healthy city experiences. Finally, it emphasizes the importance of considering environmental, behavioral, and social determinants as key indicators for urban health and achieving sustainable development goals.

Keywords — **Healthy Cities; Social equity; Sustainable Development Goals (SDGs).**

I. INTRODUCTION

In recent times, urban planning terminology has expanded significantly, including terms like the healthy city, fair city, resilient city, and active city. The concept of rights has become prevalent and widely discussed in social urban dialogues and the development of urban policies. Additionally, terms such as livability, place identity, social justice, and healthy community have emerged. This raises the question of why there are so many definitions and whether the concept of sustainability and the sustainable city might be the most comprehensive and inclusive of these terms.

Building on the accomplishments of the Millennium Development Goals (MDGs) and the Sustainable Development Goals (SDGs) established by the United Nations at the 2015 New York Summit, which outlined 17 goals and 169 targets, the health standard was notably included as (Goal 3). Since then, the concepts of Healthy Cities and Healthy Urbanism have emerged as essential indicators supporting sustainable development efforts, goals that most countries are now striving to achieve.

The World Health Organization (WHO) has played a pivotal role in developing the Healthy Cities concept, emphasizing that health is one of the most effective indicators of successful sustainable development in any city. By placing health at the forefront of urban political agendas and promoting health and equity, WHO underscored this during the development of its Thirteenth General Program of Work strategy for 2019-2023 (GPW13). The need for a consistent WHO approach to the Healthy Cities movement was discussed during a health promotion technical focal point meeting, leading to the identification of measurable spatial health indicators as key determinants of urban health and livability, aligning closely with the Sustainable Development Goals (SDGs).

Research indicates that healthy city initiatives significantly improve the quality of life and enhance the health of individuals and local communities. However, there is no universal formula for developing a healthy city; requirements must be prioritized based on the needs of the population and consideration of community inequalities. Consequently, the indicators and criteria for the healthy urbanization process will inevitably vary from city to city. A common challenge faced by cities in the Eastern Mediterranean Region in participating in the WHO Healthy Cities Project is the inability to meet the minimum and initial phase requirements, which involve addressing aspects of healthy living influenced by social and environmental factors.

Therefore, it is essential to review the development of urban health monitoring indicators and investigate the principles behind the formation of healthy cities, as well as the challenges and key factors that may influence their success in our urban communities. This approach will enable the creation of guidelines for health-oriented design and planning that support and enhance livability and social cohesion. Assessing people's needs is crucial to guide new and effective developmental initiatives that address inequalities and consider the impact of policies on health.

A. Problem statement

The rapid urbanization has led to uncontrolled growth with minimal attention to public health impacts. This included typical problems that affect health and cause many diseases such as pollution, noise, insecurity, unsafe waste disposal, along with other urban health-related issues, as problems associated with lack or insufficient of physical activity reversing unhealthy lifestyles, besides not enhanced social interaction negatively influenced the types of social support and relationships formed.

Therefore, the main research problem is non-observance determinants of health in the urbanization decision-making tools and the failure to enhance the requirements of public health for users, which negatively affects the health and wellbeing of society in general.

B. Objectives

This article aims to encourage the reorganization of urbanization restricted with health determinants by examining the principles and indicators of the World Health Organization's WHO "Healthy Cities" project. This allows for the formulation of guidelines for planning and evaluation of healthy urbanization, which will support and enhance livability, public health, social interaction, and overall community wellbeing. This is achieved through subgoals:

- Reviewing more about previous studies on the healthy cities and benefiting from them.
- Analysis and examination of healthy cities indicators for project of the World Health Organization WHO.
- Access to levels and indicators for evaluating healthy sustainable cities.

C. The importance

The importance of research in reference is due to the importance of healthy cities as there is an urgent need towards strategy for a healthy urbanism and healthy cities is more important than ever, as the "Coronavirus" pandemic has highlighted the need to strengthen the observance of healthy urbanism regulations. and it seems that city policies for our urban society lack an integrated political framework to achieve healthy cities. Healthy urban expansion for sustainable development requires prioritization and assessment, and must consider the diverse, complex and multiple needs of peoples.

- Study the possibility of application and evaluating of healthy urbanization on several levels.
- Study the main health determinants that affect city planning and in turn affect the health and well-being of users
- The environmental, economic, social and individual benefits of healthy cities in improving the quality of life and applying the principles of sustainability.

D. Methodology

The research topic adopted on the following methodologies:

Inductive approach through narrative key health-related terminology and overview of the content, principles, goals, and critical factors of healthy cities project.

Descriptive analytical approach by Study of the health city phenomenon and analyzing the health impact assessment some experiences of healthy cities, to conclude indicators of the determinants of healthy cities and healthy urbanism and practice it on several levels and the extent of its effectiveness to improve planning opportunities for healthy cities in urbanization. Thus, achieving community health and wellbeing.

II. HEALTHY CITY CONCEPTS

Healthy cities focus on establishing urban environments that are both healthier and more sustainable, incorporating principles of healthy urban design. Essential to this goal is the implementation of integrated health planning mechanisms that connect health policies with broader city-wide strategies. Central to the concept are principles aimed at reducing health inequalities, fostering social development through community engagement, promoting intersectoral collaboration, and committing to sustainable development.

A. Definition and Vision of the Healthy Cities

According to Hancock and Duhl, two founders of the healthy cities concept, "Healthy City is one that is continually creating and improving those physical and social environments and expanding those community resources which enable people to mutually support each other in performing all the functions of life and in developing to their maximum potential, in addition to promoting equity principles, social inclusion, community participation." (Saniroy,2015)

Healthy cities serve as inclusive spaces that cater to the needs of both people and the environment. It actively involves the entire community, promoting participation across diverse demographics to pursue peace and prosperity. These cities exemplify positive transformation, tackling inequalities and fostering governance and leadership that prioritize health and well-being, guided by the '6P' vision., figure 1.
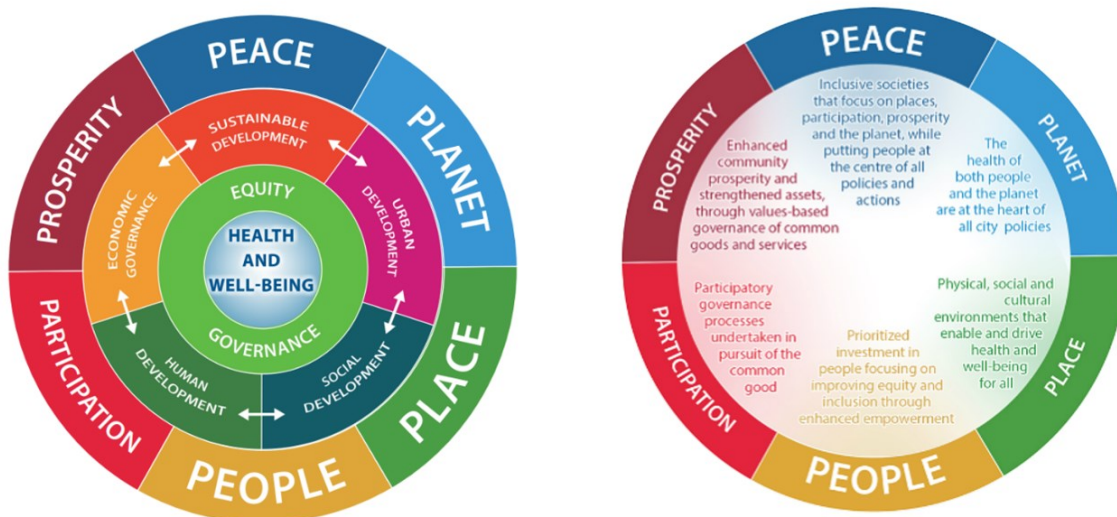

Fig. 1.general vision for (WHO) Healthy Cities Network: (**Source:** Christophe, 2022)

Table 1, The six core themes and highly relevant priority issues (Source: Christophe, 2022)

	Highly relevant priority issues
1. People	A healthy city adopts a people-centered approach to development, emphasizing investment in individuals and ensuring equitable access to common goods and services for everyone. This includes: • Allocating resources to human and social capital to drive urban development. • Encouraging inclusion, integration, and the elimination of discrimination. • Fostering trust, resilience, and a strong focus on ethics and values.
2. Participation	A healthy city sets a precedent by involving the community in decision-making processes that impact their living conditions, common goods, and services. This approach includes: • Enhancing city spaces and services to reflect community needs and assets. • Strengthening accountability and governance for health and well-being. • Empowering populations to be more resilient. • Increasing individual ownership of health and well-being.
3. Prosperity	A healthy city aims to improve community well-being and enhance resources by governing common goods and services based on shared values. This approach includes: • Implementing advanced measures of social progress. • Investing in the circular economy. • Ensuring universal minimum social protection.
4. Planet	A healthy city places the health and well-being of both its residents and the environment at the core of all its internal and external policies. This commitment includes: • A comprehensive city-wide strategy for health and well-being. • Consistency in governance levels regarding health and well-being initiatives. • Enhanced health diplomacy at the city level.
5. Place	A healthy city develops an inclusive social, physical, and cultural environment that supports the pursuit of health and well-being for all residents. This encompasses: • Transitioning from a needs-based to an assets-based approach. • Prioritizing human-centered urban development and planning. • Incorporating health equity and sustainability into urban development and planning. • Increasing inclusiveness in the use and governance of public spaces.
6. Peace	A healthy city sets a precedent by promoting and maintaining peace in all its actions, policies, and systems. This commitment includes: • Establishing institutions and governance systems that prioritize social justice and participation. • Promoting cultural norms of inclusion and equity through a non-exploitative, egalitarian approach. • Implementing formal governance and societal norms to address discrimination and all forms of violence.

B. Benefits of the Healthy Cities

Healthy Cities initiatives aim to create urban environments that foster the health and well-being of residents, all of which can provide significant economic, societal, and individual benefits. Therefore, urban development that supports good health and its social determinants throughout life benefits improving quality of life and sustainability, that are common global political ambitions. Here are some key benefits of such initiatives:

➢ Environmental benefits (Enhanced Environmental Quality):

• Cleaner air and water: Efforts to reduce emissions, manage waste, and protect natural resources improve air and water quality, benefiting both residents and the ecosystem.

• Sustainable urban planning: Incorporating healthy building practices, renewable energy sources, and efficient public transportation reduces the environmental footprint of cities.

• Climate resilience: healthy urban planning and green infrastructure can help cities withstand and adapt to climate change impacts, such as extreme weather events.

• Better living conditions: Clean, and healthy urban environments enhance the overall quality of life and wellbeing for residents.

• Access to amenities: Improved access to healthcare, education, cultural recreational facilities, and enriches the daily lives of city dwellers.

➢ Social benefits: Ensuring fair distribution and reducing socioeconomic disparities by supporting all segments of society and providing protection for marginalized groups are crucial aspects of sustainable development.

• Reduced disease incidence: Initiatives to reduce air and water pollution, encourage physical activity, and provide access to healthy foods can lead to lower rates of chronic diseases such as asthma, diabetes, and heart disease.

• Mental health benefits: Access to green spaces, community activities, and mental health resources can improve mental well-being and reduce stress, anxiety, and depression.

• Active lifestyles: Designing cities with pedestrian-friendly infrastructure, bike lanes, parks, and recreational facilities encourages residents to engage in physical activities, reducing the risk of obesity and related health conditions.

- Safe spaces: Creating safe, accessible spaces for physical activity promotes exercise and outdoor recreation.

- Community engagement: Initiatives that promote social interactions and community involvement help build stronger.

- Inclusion urban design: Ensuring that public spaces are accessible and welcoming to all residents, regardless of age, ability, or socioeconomic status, fosters inclusivity and social integration.

- Economic benefits: Increasing economic growth to reduce poverty rates, increasing the participation of marginalized individuals in the labor market and achieving economic empowerment.

- Reduced healthcare costs: By preventing diseases and promoting health, Healthy Cities can reduce the burden on healthcare systems and lower medical expenses for residents.

- Increased property values: Improved environmental quality and infrastructure can lead to higher property values and attract investment.

- Reduced transportation costs: Designing pedestrian-friendly cities, bike lanes and efficient public transport reduces the cost burden of individual transportation.

- By focusing on these areas, healthy cities initiatives can create urban environments that support the health, well-being, and prosperity of their residents.

C. Principles of the Healthy Cities

The basic principle of healthy cities involves enhancing both the physical and socio-economic environments that influence health, empowering individuals to reach their full potential and achieve "Health for All" through a collective mission of "All for Health". Central to this approach is prioritizing health equity and social justice in decision-making processes. Achieving a healthy city involves addressing three key dimensions figure 2. (Shin Young,2015)

- Healthy People.
- Healthy Environment.
- Healthy Communities.

Fig. 2. Healthy cities framework and overall goal for healthy Communities (Source: Shin Young,2015)

Healthy cities continually integrate concepts and methodologies to tackle public health challenges in urban settings. Beyond identifying priorities, it is equally important to strategize how these priorities will be addressed. Traditional public health strategies, which often focus narrowly on immediate causes rather than underlying determinants of health and unhealthy behaviors, may have limited effectiveness in urban contexts. Therefore, key principles and approaches embraced by healthy cities include addressing root causes, promoting holistic interventions, and fostering innovation to effectively enhance urban health outcomes. So key issues, and main Principles that should be employed by Healthy Cities are: (Tsouros, 2020).

1. Explicitly focus on both health and well-being to highest quality of life for the people and community.
2. Reduce health disparities and emphasis on health equity for all and universal health coverage (UHC).
3. Addressing the social determinants of health (SDOH) and health inequalities. Under the SDH umbrella social justice.
4. Understanding the specificity of the urban and built environment and its positive and negative impacts on health and well-being.
5. The Healthy Cities objectives and Sustainable Development Goals (SDGs) go together, and they are mutually reinforcing.

D. Objectives of the Healthy Cities

The overarching aim of healthy cities is to promote extended, long healthy lives and improv quality of life for all. Key objectives of a healthy city include implementing a population-based approach to health that improves the overall health status of the community. This involves creating supportive environments that facilitate health for everyone, investing in the development of healthy spaces, and ensuring that healthy choices are accessible and convenient. Additionally, addressing the social determinants of health (SDH). A Healthy City aims to:

- Environmental quality, encompassing noise, air, soil, and water pollution.
- Provision of basic sanitation, hygiene, and effective waste management.
- Affordable, safe, stable, and socially integrated housing.
- Access to high-quality transit, safe roadways, sidewalks, and bicycle lanes.
- Availability of safe and quality open spaces, parks, recreational facilities.
- Optimal access to appropriate public health and healthcare services for all.
- Access to quality childcare and education.
- Access to meaningful, safe, and living wage employment, with workplace wellness programs.

- Development of prevention programs and promotion of healthy behaviors.
- Access to affordable and quality goods and services.
- Protection from crime and physical violence.
- Promotion of social cohesion and political empowerment.
- Public participation and control over decisions affect their lives.

E. Human ecology model of the health map

Urban planning plays a critical role in shaping the environment and influencing health outcomes in systematic ways. Figure 3 illustrates a settlement health map, depicting how spatial planning impacts various aspects of social and economic life, as well as the broader environment.
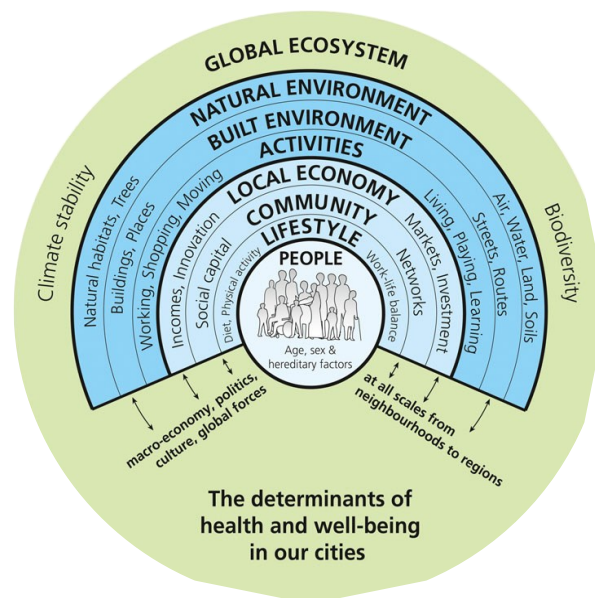

Fig 3, A settlement health map showing the broad nature of multiple impacts of human settlement form on health. (Source: Barton and Grant, 2016)

The health map places people's health at the center, contextualized within planetary health on a global scale. It outlines six concentric arcs that range from individual lifestyles to the natural urban environment, encompassing urban determinants of health. The outer three arcs are highlighted to emphasize their significance for stakeholders directly involved in shaping the built environment. As a systemic tool, the health map allows flexibility in defining its components and understanding the relationships between them. Stakeholders applying this tool in planning for a healthy city must adapt its concepts to fit local circumstances, translating each arc into clear and measurable objectives. (Grant, 2018)

Table 2, The six core themes and highly relevant priority issues (Source: Christophe, 2022)

Arcs of the Health Map	Objectives for Healthy Urban Planning
1. People	• Addressing the needs of all population groups. • Reducing health disparities. • Engaging communities in fostering a healthier local environment.
2. Lifestyle	• Encouraging active transportation. • Promoting physical activity opportunities. • Facilitating access to healthy food options.
3. Community	• Cultivating social networks, cohesion, and inclusivity. • Fostering local pride and cultural identity. • Promoting safety.
4. Economy	• Ensuring accessible employment opportunities. • Supporting a resilient local economy.
5. Activities	• Strategically locating retail, educational, leisure, cultural, and health facilities. • Providing responsive, high-quality community facilities.
6. Built environment	• Ensuring diverse, high-quality housing options. • Promoting green spaces for mental well-being and nature interaction. • Planning aesthetically pleasing environments with acceptable noise levels.
7. Natural environment	• Improving air quality. • Ensuring secure and quality water supply and sanitation. • Preserving soil conservation and quality. • Mitigating environmental risks.
8. Global ecosystems	• Reducing transport and building-related greenhouse gas emissions. • Enhancing city and regional support for global biodiversity.

Fig. 4. Diagram showing Determinants of Health

The health map is widely recognized as a valuable tool for comprehending the interplay among various aspects of existence. It offers a comprehensive model depicting the connections between individuals, well-being, and the local and global environments.

III. PUBLIC HEALTH AND DEVELOPMENT

Health goes beyond medical care; individuals thrive when they reside in supportive environments and actively engage in community life. In healthy cities, there is a direct connection between factors like architecture, transportation, housing, and health outcomes. Our surroundings significantly influence us, offering opportunities for individuals to manage their own health by making choices that positively impact their behaviors and well-being.

The definition of health according to WHO, is defined as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity".

The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being, without distinction of race, religion, economic or social condition. (Barton & Grant,2016). Ther are differences between **dimensions and determinants** of health, Dimensions of health, what health is, but Determinants of health, how health status is determined.

A. Determinants Factors of Health

The factors influencing an individual's health can be categorized as either intrinsic (genetic) or extrinsic (environmental), and their interaction can either enhance or diminish overall health. These factors include the five determinants of population health: biological, behavioral, social environment, physical environment, and health services. Social, behavioral, and physical environmental factors collectively exert more than 65% influence on individual health, whereas health services contribute less than 15%.
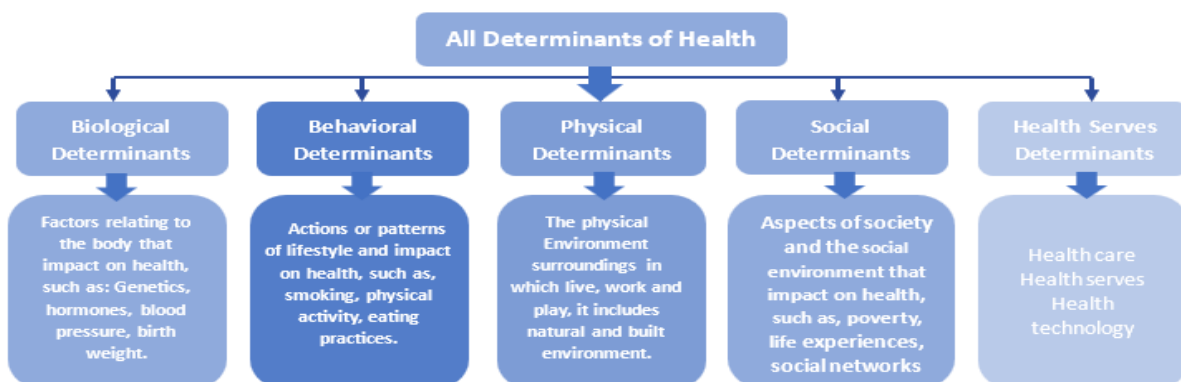
So, the health of an individual results from both uncontrollable factors, such as predisposition to diseases, and controllable factors like diet, smoking habits, and physical activity levels. These factors collectively known as determinants of health, are now classified into four categories: biological, behavioral, physical environment, and social environment. Health care falls under social determinants, which play a crucial role at the population health level, while biological and behavioral determinants are significant at the individual level .(Barton and Grant, 2016)

B. Dimensions and levels of holistic Health and Wellbeing

The WHO definition of health connects it closely with well-being, framing health as a fundamental human right that necessitates both physical and social resources for attainment and maintenance. Well-being is understood from two viewpoints: clinically, it signifies the absence of negative conditions, while psychologically, it denotes the presence of positive attributes.

Health and well-being encompass more than just physical and mental aspects. Holistic well-being emphasizes an understanding and complete integration of all factors influencing quality of life. Experts have structured health and well-being into a model with multiple interconnected factors, as illustrated in Figure 5, where issues in one area can impact many others. Conversely, improvements in one area can generate positive effects across the entire system, aiming for overall balance.

Fig.5 , A pyramid showing the levels and Dimensions of Health and Wellbeing factors

C. Risk and challenges to health

The WHO estimates that over 13 million deaths occur globally each year due to preventable environmental factors, exacerbated by the accelerating climate crisis, now recognized as humanity's foremost health challenge. Issues with air quality, food safety, water purity, and the health of ecosystems collectively contribute to 23% of global mortality. This represents a shift from infectious diseases to non-communicable diseases, largely driven by factors like chemical

exposure, deteriorating air quality, and unhealthy lifestyle choices. (Jacqueline,2016)

A recent study examined health risks related to physical inactivity, air pollution, noise, and heat, assessing compliance with recommended guidelines. The study quantified how these exposures contribute to premature mortality and identified five major global risks to public health. It estimated that nearly 20% of premature deaths each year could be prevented if international recommendations were complied with to avoid these risks. (Grant, 2018)

1. Climate Change Impact

Climate change poses a profound risk to human health, influencing not only the physical environment but also impacting all facets of natural and human systems, including social, economic, and healthcare systems. This threat compounds existing challenges and has the potential to reverse health progress. As climate conditions evolve, there is an observed increase in the frequency and intensity of extreme weather events such as storms, heatwaves, floods, droughts, and wildfires. These weather hazards directly and indirectly jeopardize health by heightening mortality rates, exacerbating non-communicable diseases, facilitating the emergence and spread of infectious diseases, and escalating health crises

2. Social inequality

Social inequality significantly impacts health outcomes across populations. Disparities in income, education, employment opportunities, and access to healthcare contribute to unequal health outcomes. Individuals with lower socioeconomic status often experience higher rates of chronic diseases. Limited access to quality healthcare services and preventive measures further exacerbates these disparities. Additionally, social inequalities can lead to stress, mental health issues, and reduced life expectancy. Addressing social inequality requires comprehensive strategies that promote equitable access to resources, opportunities, and healthcare services to improve overall population health.
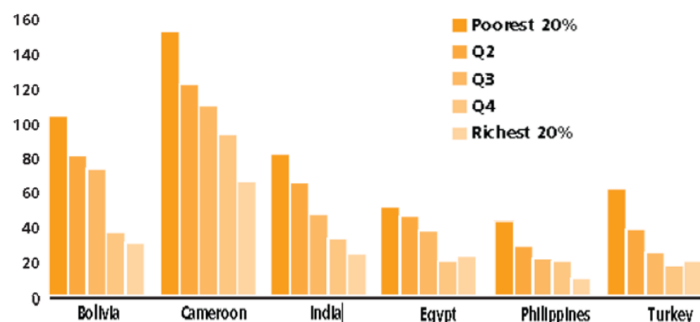
Fig. 6, Under-five mortality rates per 1000 live births by urban wealth quintiles in selected countries. (Source: http://www.who.int/en/health)

3. Lack of Physical activity (Overweight and Obesity):

Over the past 20–30 years, there has been a notable increase in overweight and obesity rates globally. Excess body fat significantly elevates the likelihood of various health complications, including diabetes, cardiovascular disease, hypertension, certain cancers, sleep disorders, and psychological ailments. Obesity is identified as a leading contributor to disease, accounting for approximately 7.6% of Egypt's total disease burden and ranking closely behind high blood pressure as a primary cause of death. Roughly half of Egyptian adults are classified as overweight or obese.
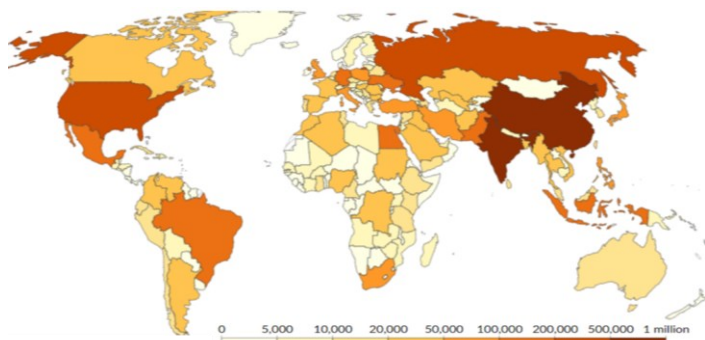
Fig. 7, Estimated annual number of deaths attributed to obesity. (Source: IHME, Global Burden of Disease, 2019) Note: Obesity is characterized by a body mass index (BMI) ≥ 30. BMI is calculated by dividing a person's weight in kilograms by the square of their height in meters.

4. pollution level

The level of pollution has a profound impact on human health. Exposure to pollutants in the air, water, and soil can lead to a wide range of health problems, especially air pollution stands as the foremost environmental risk to human health. According to the WHO, approximately 7 million premature deaths annually are attributable to air pollution. Certain pollutants, known as short-lived climate pollutants, not only pose health risks but also contribute to near-term warming of the planet. Therefore, initiatives aimed at improving air quality are also effective in addressing climate action, and efforts to mitigate climate change can lead to improvements in air quality, resulting in immediate health benefits that significantly increase the value of investments made.

5. Unintentional Injuries

Unintentional injuries have a significant impact on health worldwide, contributing to morbidity, mortality, and economic costs. These injuries, which occur due to accidents or unforeseen events, include falls, road traffic accidents, drowning, burns, poisoning, and sports-related injuries, among others. They often result in physical injuries such as fractures, concussions, and lacerations, as well as psychological trauma. Unintentional injuries are a leading cause of death among children and young adults globally. Urban planning designed to enhance safety and reduce risks are crucial in mitigating the impact of unintentional injuries on health and well-being
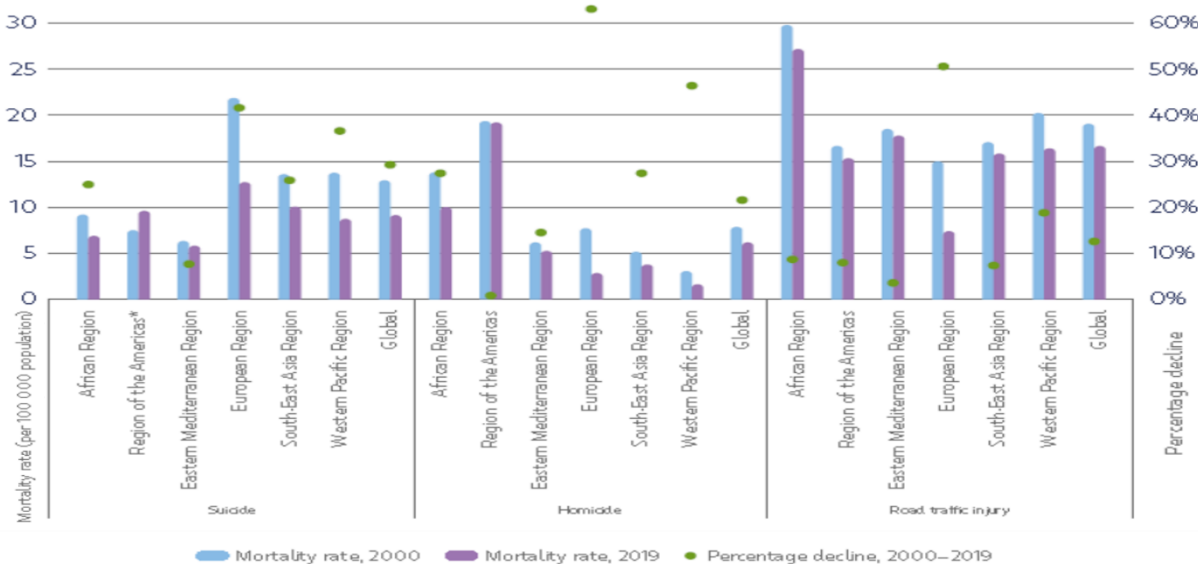

Figure 8, Mortality rates due to suicide, homicide, and road traffic, by WHO region and globally,2000-2019. (Source: World health statistics, 2023)

IV. WHO 'HEALTHY CITIES' PROJECT ON "HEALTHY URBAN PLANNING"

The WHO initiated the Healthy Cities Project in 1986 to advance the principles outlined in the Ottawa Charter for Health Promotion. This project introduced a forward-thinking approach to health promotion that extends beyond individual behavior change to encompass broader structural and policy-oriented strategies. Originally conceived as part of the Health for All initiative aiming to achieve universal health goals by 2000, the program has been reaffirmed under Health 21. Its primary objective is to ensure that all global citizens attain a level of health that enables them to lead productive, socially integrated, and economically fulfilling lives.

A. Characteristics of a Healthy City

Healthy cities encompass various fundamental qualities and priorities that enhance health, alongside criteria and 11 standards established by the WHO Health Cities Project. These standards encompass essential requirements for human health and elements promoting social well-being.

Hancock & Duhl proposed the following 11 standards as key parameters for healthy cities, communities, and towns: (Shin Young,2015)

1. A clean, safe, high-quality environment (including housing).
2. An ecosystem that is stable now and sustainable in the long term.
3. A strong, mutually supportive, and non-exploitative community.
4. A high degree of public participation and control over the decisions affecting life, health.
5.The meeting of basic needs (food, water, shelter, income, safety, work) for all people.
6. Access to a wide variety of experiences and resources, with the possibility of multiple contacts, interaction, and communication.
7. A diverse, vital, and innovative economy.
8. Encouragement of connections with the past, with varied cultural and biological heritage.
9. A city form (design) that is compatible with and enhances the preceding parameters and forms of behavior.
10. An optimum level of appropriate public health and sick care services accessible to all.
11. High health status (both high positive health status and low disease status.

B. The Healthy Cities Action Domains

During a health promotion technical focal point meeting in Geneva in February 2019, the necessity for a unified WHO approach to the Healthy Cities movement was introduced and deliberated. Findings emphasized both commonalities and notable differences across regions, addressing varied priorities and contextual relevance specific to each region. A comprehensive two-phase rapid survey was conducted to provide insights and inform the discussions: (Tsouros, 2020).

- Focused on three main aspects concerning the role of Healthy Cities within each WHO region: its organizational placement within the WHO structure, its alignment with regional political declarations, strategies, and plans, and its primary operational characteristics, themes, and priorities.
- It also explored the key features and themes of the Healthy Cities initiative, along with the role played by the WHO headquarters in supporting this global movement.

Table 3, showing the Healthy Cities Action Domains: (Source: Tsouros, 2020).

HEALTHY CITIES ACTION DOMAINS	
1. **Improve city governance for health and well-being**	• Developing local health partnerships. • Enhancing accountability measures. • Creating a comprehensive city health profile. • Incorporating health considerations into all local policies. • Engaging in city diplomacy.
2. **Reduce/ minimize health inequalities**	• Clarifying the meaning and root causes of inequalities and their detrimental effects on society. • Assessing and measuring inequalities. • Formulating a detailed action plan for the city.
3. **Promote health in-all-policies approach**	• Creating mechanisms and building capacity to incorporate health and equity considerations into local policy-making. • Ensuring policy coherence that supports health and promotes synergistic outcomes. • Enhancing the capacity for health impact assessments.
4. **Promote community development and empowerment, and create social environments that support health**	• Encouraging health literacy. • Building community resilience. • Fostering social dialogue, participation, and inclusion. • Supporting local community-based projects and initiatives. • Providing social support for the most vulnerable. • Promoting physical activity and active living across all age groups. • Establishing smoke-free physical and social environments. • Ensuring access to healthy food and sustainable nutrition while preventing young people from easily accessing sugary foods and drinks. • Addressing mental health issues and well-being, and reducing stress within the community.
5. **Create physical and built environments that foster health and encourage healthy choices**	• Creating safe and clean neighborhoods. • Tackling issues related to poor sanitation, air and noise pollution, hygiene, and housing conditions. • Promoting cycling and walking and investing in healthy transportation options. • Making the city friendly for both children and the elderly. • Addressing climate change and minimizing carbon footprints. • Ensuring access to green spaces, areas for social interaction, and good facilities for everyone. • Investing in healthy urban planning and design, working closely with urban planners and architects.
6. **Improve the quality of and access to local health and social services**	• Ensuring universal health coverage. • Enhancing the quality of services to meet the needs and expectations of diverse community groups. • Eliminating barriers, including cultural ones, that lead to underuse or disruption of health and support services. • Improving coordination between primary health care and other public health services.
7. **Consider and plan for all people in the city and prioritize those most in need**	• Providing every child with a healthy start in life. • Guaranteeing access to education for all, including pre-schools for all children. • Tackling ageism and promoting healthy aging. • Mapping the social landscape of the city, focusing on the needs of vulnerable and socially disadvantaged individuals.
8. **Strengthen local public health services and capacity to deal with health-related emergencies**	• Investing in health promotion and disease prevention programs at both the population and community levels. • Tackling obesity in both young people and adults. • Enhancing the capacity to respond to emergencies related to climate change, weather phenomena, epidemics, and natural disasters.
9. **Plan for urban preparedness, readiness, and response in public health emergencies**	• Developing inclusive surveillance practices. • Providing information and implementing evidence-based actions that ensure no one is left behind. • Understanding and addressing vulnerabilities, including both immediate and long-term care. • Focusing on community strengthening and response. • Planning emergency measures that ensure everyone is included.

The Healthy Cities concept is continually evolving, shaped by the ongoing accumulation of new evidence, experiences, and the emergence of new priorities and political changes. To facilitate regular updates to the Healthy Cities agenda, it is recommended to implement a gradual approach that spans three to five years. Over the past thirty years, the Healthy Cities program has evolved in five-year stages, incorporating a range of experiences and insights: (Tsouros, 2020).

- Continuous updating of its objectives and necessities.

- Incorporation of new global and regional strategies.

- Assessing outcomes and monitoring advancement.

- Enabling participating member cities to withdraw from the project at the end of a particular phase without incurring any political repercussions.

C. WHO Healthy cities approach and action plans

The WHO Healthy Cities networks have progressed through various five-year action plans and have now entered the seventh phase (2019-2025), which was extended due to the COVID-19 pandemic. This phase is guided by the political mandate established in February 2018 by the consensus of mayors in Copenhagen. A comprehensive guide has been issued to support the development and sustainability of effective healthy city structures and operations. This guide, responding to requests from member cities and incorporating new health and well-being knowledge, outlines 20 steps for creating a healthy city project. These steps are divided into three chapters: initiation, organization, and action. This new guide builds upon the best practices from the WHO regional networks of Healthy Cities. (Christophe, 2022)
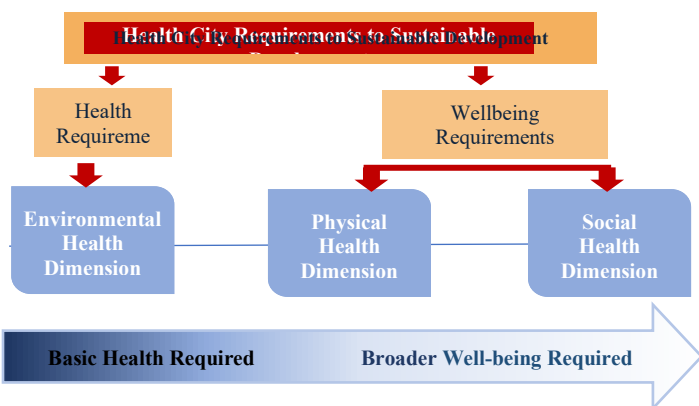
Fig. 9, shows program implementation framework of WHO healthy city, (Source: Christophe, 2022).

Creating a healthy, equitable, and sustainable city for all is a multifaceted journey that involves social, human, urban, and economic dimensions. The 20 outlined steps guide this developmental process through a series of interventions and activities aimed at fostering a healthier city. Political commitment is essential as a foundational requirement, and developing a comprehensive city strategy is crucial. Many steps

concentrate on establishing the necessary structures and processes of local governance, laying the groundwork for incorporating health considerations into all local policies. This foundation helps create healthy settings with improved living and working conditions. These actions are part of a continuous improvement process and do not necessarily need to be followed sequentially. The order of steps adopted by cities depends on local circumstances and opportunities, varying from one city to another in both initiating and sustaining a healthy city approach.

V. LEVELS OF HEALTH AND WELLBING INTEGRATION IN URBANIZATION

Healthy urban expansion for sustainable development necessitates prioritization and evaluation. When examining the standards and indicators for monitoring urban health development in the WHO Health Cities Project, it is evident that some indicators are specific priorities (fundamental requirements) for public health concerns, while others are broader goals (well-being requirements) that are more challenging to assess in our society. Currently, our society struggles to investigate even the minimum primary requirements for public urban health.

Therefore, if the goal is to genuinely improve health, the evaluation should be community-based. Healthy cities can implement various levels of evaluation, leading to the identification of three progressive levels of health and planning integration. The influence of urban design and planning on physical, mental, social, and cultural health aspects can be measured by these three levels.
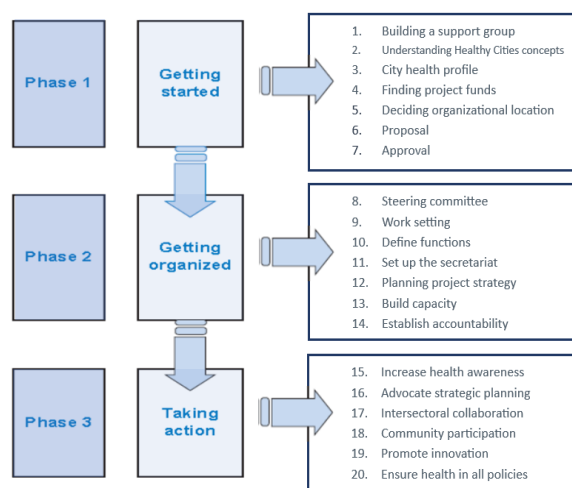

Fig. 10, Levels of Health requirements Integration in Urbanism to improve Sustainable urban health development of society.

- The first level involves fundamental environmental health factors, encompassing the critical life support roles of settlements such as providing shelter, access to food and clean water, fresh air, and efficient sewage treatment, safer environments. This primary level of planning is so crucial to health that it is often taken for granted and almost subconscious.

- The second level extends past environmental health to encompass various aspects of settlement planning and design that impact health and well-being. Elements such as opportunities for physical activity, contact with nature, aesthetic pleasure, access to fresh food through allotments, bicycle networks, pedestrian streets, and reduced car dependency all contribute to enhancing physical health. However, the effectiveness of this level is often constrained by broader factors of economic development and spatial density.

- The third level involves fully integrating community health into the planning process, where the focus shifts towards making health and social well-being a central objective and fundamental

purpose of local plans. This approach aims to promote equity, social inclusion, social justice, and economic development through comprehensive urban planning initiatives.

Action planning for the Healthy Cities project should be a flexible and adaptive process, open to ongoing review and adjustment based on feedback from evaluations and evolving community needs and conditions. Therefore, monitoring and evaluating the outcomes of planned activities are essential to provide the necessary evidence and rationale for the ongoing evolution and improvement of Healthy Cities initiatives.

Table 4, Health Assessment Indicators of Healthy City for sustainable planning

Dividing health requires according to Health & well-being factors			Sustainable Development Goals and Healthy City for sustainable planning		
Dimensions and Determinants of Health		levels of health & Well-being	Health Indicators	Sustainable Development Goals (SDGs)	
The first level	Environmental Dimension	**Natural environment**	Environmental factors that can adversely affect human health. These factors include water, air, soil, food, and waste.	Air quality Water quality Waste disposal Climate change Ambient noise Sanitation quality Standard & quality of housing Transportation& road safety Public transport access Green and Blue spaces Crime and violence-peace Secure and safety Access to facilities Human scale Control or autonomy & comfort	Achieving an environmental balance entail ensuring good air quality, water, and food security. This involves addressing climate mitigation and adaptation. Additionally, it is essential to provide safety and foster a sense of security. It is also important to comprehend the unique characteristics of the built environment and how they positively and negatively impact human health.
		Built environment	Improving quality of life and be more livable and attractive to residents, employers, and visitors.		
The second level	Physical Dimension	**Behavioral & Biological Determinants**	Maintain lifestyle choices physical health and more doing physical activity by the exercise, healthy diet, adequate rest and sleep and no smoking, adherence to international standards for physical activity	Smoking Obesity Access to Physical activity Walking ability Bike ability Access to healthy foods Self-resprouted symptoms People vitality Sports area Health care Considerate movement old age, disabled Frailty & Illness	Engaging in regular moderate physical activity boosts mental, physical, and social well-being while aiding in the prevention of illnesses and obesity. Also, active travel options minimize reliance on transportation, leading to fewer accidents, lower expenses, and reduced air pollution. Enhancing public health also helps decrease healthcare costs, thereby alleviating the strain on health services.
The third level	Social Dimension	**Emotional**	Refers to the ability to understand and manage emotions in a positive way, emotional health is closely related to mental health.	Happiness Mindfulness Affect satisfaction Positive Thinking Emotional Stability Resilience Skills Negative spatial experiences Stress and psychological states	Emotional support helps mitigate stress by promoting awareness and acceptance of one's emotions. It fosters a sense of control over one's life and enhances mental health.
		Financial	More productive citizens and workers. And increasing the participation of marginalized individuals in the labor market	Employment opportunities Income level, standard of living Cost efficiency Universal health coverage Employment of the disabled Registered unemployment Higher productivity	Healthy individuals are more productive at work, Increasing the economic growth rate and achieving economic empowerment, aim to reduce poverty rates.

		Intellectual	Cognitive skills and performance Caring for the gifted and talented athletes and providing health education courses	Literacy Rate Educational level Healthy literacy Language and literacy Childhood development Health education course	Enhancing the educational system to align with global standards and ensuring access to education for everyone without discrimination is crucial.	
		social	Quantity and quality of an individual's interpersonal ties and the extent of involvement with the community (Personal or group performance and morality)	Social equality Social connectedness Social adjustment Civic participation Health care delivery Sense of community identity Reduced crime Community Belonging Familial context	Ensuring equitable distribution helps reduce socioeconomic disparities and eliminate prejudice. It also promotes neighborhood revitalization, strengthens social networks, fosters good social relationships, and enhances the sense of inclusion.	
		spiritual	Connected with religious beliefs and practices. It also deals with personal creeds	Respecting religious beliefs Respecting health beliefs Cultural norms Principles of behavior	Meditations, prayers, and spiritual gatherings are held to support and sustain spiritual health.	
		Occupational	The choice of profession, Satisfaction level at job, career ambitions and personal performance and managerial	Perceptions of improvement Occupational status Workplace environment Employment security Intention to quit job Improve city governance Absenteeism or presenteeism	Providing job-related facilities and ensuring access to work are essential. Enhancing the behavior of management and colleagues is equally important. Also, maintaining a balance between work, rest, and recreation is crucial for well-being.	

VI. SOME APPS AND EXAMPLES FOR HEALTHY CITIES

Action planning for the Healthy Cities project should be a flexible and adaptive process, open to ongoing review and adjustment based on feedback from evaluations and evolving community needs and conditions. Therefore, monitoring and evaluating the outcomes of planned activities are essential to provide the necessary evidence and rationale for the ongoing evolution and improvement of Healthy Cities initiatives.

Table 5, Reviews model analysis of some global health cities

	Asker Dense city, Oslo, Norway,(2014)	The Historic New, Odense, Denmark, (2011)	Koege Coast, Stockholm, Sweden, (2010)
General Philosophy	The vision for Asker, a dense city, is encapsulated in 'Dense city, open park, and sports enthusiasm.' This vision aims to expand the city through a strategy of creating large public parks, plazas, and squares dedicated to recreational activities. By introducing a new active route, the loop, it connects the old and new areas of the city, promoting urban leisure and active communities.	The vision integrates the future with the past by merging the new and old. Thomas B. Thrigesgade, a once heavily trafficked street that harshly divided the historic center of Odense, will be transformed into a lively urban space for pedestrian movement and vehicle cancellation This proposal aims to restore the connections within the historic city, reuniting its separated parts.	The vision for Koege Coast focuses on creating a multi-functional, dense, and livable city that builds on Koege's cultural history. The master plan includes three neighborhoods, each with its unique identity. The city center will be revitalized with new residential buildings. The Collstrop area, an industrial site, will be transformed into a mixed-use space, while the southern area will feature a blend of various uses.

Environmental Dimensions	The city can generate its own energy and produce some of its food, minimizing waste, and fostering a circular society. The focus is on reducing demand through passive construction and energy-efficient technologies. The master plan offers a flexible framework that can adapt to varying density scenarios while ensuring a high quality of life and easy access to all functions and services. Additionally, excess rainwater will be reused for irrigation.	The broad green artery integrated into the plan ensures access to all neighborhoods, public functions, and social activities. It supports climate adaptation through a thoughtful distribution of functions, typologies, and resources, fostering urban solidarity through mixed-use, diversity, and efficient land use. The plan creates a framework that combines biodiversity, urban transformation, and research into nature-based solutions and green urban connections.	Koege's location by the sea, combined with the many qualities of the city that is rooted in its long history as a local trade center, gives it a unique character. The character of each neighborhood is in essence defined.The plan for the city centre and the station area builds on the layout of the historic center , public green spaces form a complex ecosystem that addresses climate change mitigation.
Physical Dimensions	Incorporating more sports and physical activity into Asker's urban context, an active loop will link the city and its recreational areas by introducing a new route for pedestrians and cyclists and ample parking for bicycles. This loop will connect the old and new parts of the city, promoting urban leisure and active communities. Smart mobility and infrastructure will ensure quick connections and access to essential social infrastructure.	Beneath the transformed urban area, a large, covered parking facility extends across the site, returning the urban and public spaces above to pedestrians and cyclists, making them safe and comfortable. This parking area is linked to the urban spaces above through large hybrid-use openings and various recreational activities. A diverse mix of programs throughout the area ensures vitality and activity, including urban farming to provide healthy food and nutrition.	The area is designed with pedestrian-friendly streets and green arteries connecting the main square, the church, the museums, and the shopping street, creating a new frontage towards the harbor. The new area features a robust infrastructural strategy with bike lanes, and several initiatives to make traffic the easiest and most convenient form of transportation. The plan proposes a center that leverages synergies between sports and the landscape.
Social Dimensions	The existing central plaza in Asker will be reconfigured to allow for the expansion of the city center. New urban spaces will offer a broader range of recreational activities and social venues. The loop will include quieter zones for informal meetings and local gatherings, fostering a more intimate atmosphere. The plan also focuses on preserving the city's cultural and social identity, while emphasizing cultural and intellectual diversity.	The concept involves reconstructing parts of historic building plots while adding a new architectural layer, drawing inspiration from both Odense's history and recent developments. This includes temporary streets, alleys, squares, and hidden pocket parks, creating a lively and engaging city for its inhabitants. The development of open spaces in the city aims to encourage interaction and foster a sense of place, establishing areas deeply rooted in the urban identity.	The unique identity of Koege is defined by the dynamic contrast between its modern harbor and historic center. Transforming the area into an appealing urban enclave, Koege aims to develop a green business district integrated with hotels, residences, and shopping areas. This transformation seeks to create attractive work environments that foster creativity for all groups.

Therefore, it can be summarized that effective policies for healthy cities can mitigate health risks, such as reducing disease rates, injuries, and the impacts of climate change. A well-governed city will fulfill people's fundamental needs, promote safety and inclusivity, and improve their overall well-being. This signifies a growing recognition that the built environment plays a crucial role in addressing broader health determinants, with increasing acceptance of these principles and goals prompting cities worldwide to take proactive measures.

VII. DISCUSSION AND ANALYSIS

The article discusses Healthy Cities and healthy urbanism concept. It emphasizes the importance of promoting health, equity, and sustainability in cities and highlights the characteristics of a healthy city, including a clean and safe environment, an active lifestyle, and social inclusion for all. Healthy cities are seen as a strategic means to enhance health and well-being in urban areas. Furthermore, the article examines the challenges and factors that may affect the success of healthy cities, such as climate change, social inequality, physical inactivity, pollution, and unintentional injuries.

The article also outlines the areas of work of the WHO Healthy Cities Project, which aims to improve city management, reduce health disparities, promote health in all policies, and create supportive physical and built environments, thereby achieving the Sustainable Development Goals (SDGs). It also mentions the evolution of the WHO Healthy Cities networks and the current phase (2019-2025). The article underscores the importance of political commitment, city strategy formulation, and local governance structures in implementing the healthy cities approach.

The article discusses the need for indicators to monitor urban health development to address the challenges of rapid urbanization, the difficulty of participation, and the application of the WHO Healthy Cities Project indicators. This is important due to the role of healthy urbanization in supporting sustainable development and addressing public health impacts, including in the context of the COVID-19 pandemic and the increase in infectious diseases. Therefore, the study proposes a set of methodological strategies based on integrating health considerations into urban planning processes in general.

It emphasizes that city planning that considers health factors and determinants is one of the fundamental pillars for enhancing public health, well-being, and improving overall quality of life. It also calls for establishing health policies and key city strategies in collaboration with all sectors, which helps lay the foundations for sustainable healthy urbanization and achieving the goals of improving health for all. This is achieved by following an integrated approach to implementing and evaluating healthy urbanization at multiple levels.

Therefore, the study identifies **three progressive levels** of health and planning integration that can be used to evaluate healthy cities, including:

1. Environmental Dimensions: Basic needs or fundamental required such as a clean, safe environment and access to basic needs.
2. Physical Dimensions: More advanced aspects such as encouraging physical activity and active life general in urbanism.
3. Social Dimensions: Progressive stages and more forward-looking required including strong community support, and public participation overall well-being.

By setting indicators for the environmental, behavioral, and social determinants of health and integrating them through three prioritized levels for monitoring and evaluating urban planning policies and interventions, it is importance in improving community health and well-being and achieving the sustainable development goals (SDGS) overall.

VIII. CONCLUSION AND RECOMMENDATION

The study conducted in this article focused on the concept of healthy cities and the implementation of the WHO Healthy Cities project. It also examined the action domains of the WHO Healthy Cities project, which encompasses various areas such as improving city governance, reducing health inequalities, promoting health in all policies, and creating supportive physical and built environments.

The study highlighted the dimensions and the determinants that affect health integration in urban planning, ranging from basic environmental health to fully integrating community health into the planning process. Therefore, it has been proven that observance determinants of health in the urbanization decision-making tools, enhance the requirements of public health for users, and improve the health and wellbeing of society and contributes to achieving the sustainable development goals in general.

Based on the study's findings, several recommendations can be made in urbanization decision-making, these include:

- Enhancing Intersectoral Collaboration: All sectors, including health, housing, transportation, education, and the environment, must collaborate to ensure integrated efforts to achieve public health goals.
- Integrating health determinants in all urbanism policies: Policies aimed at improving overall health and well-being should be established, with a focus on disease prevention and promoting a healthy lifestyle.
- Designing Supportive Urban Environments: Cities should be designed to be environmentally friendly and healthy, including the provision of green spaces, walking and cycling areas, and efficient public transportation systems.
- Strengthening collaboration with local stakeholders: The community should be involved in decision-making and policy planning to ensure their needs are met and to achieve community endorsement and support.
- Focusing on Health Equity: should be made to reduce health disparities among different societal groups and create supportive environments for vulnerable populations to ensure equal access to health services and basic infrastructure.
- Education and Awareness: Raising awareness about the importance of public health and a healthy lifestyle through educational and awareness programs targeting all segments of society.

The study also recommends that cities adopt a holistic approach to healthy city planning and assessment, considering the environmental, behavioral, and social determinants of health. through monitoring and evaluating the implementation of health policies and the achievement of goals, using measurable indicators to identify successes and challenges. By implementing these recommendations, cities can create healthier, more equitable, enhancing the quality of life, and sustainable environments for their residents.

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