A STUDY ON THE RELEVANCE OF URBAN PARKS AND RECREATION SPACES TOWARDS ACHIEVING 'HEALTHY CITIES' IN DEVELOPING COUNTRIES WITH SPECIAL REFERENCE TO SRI LANKA

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Abstract: The World Health Organization's (WHO) Healthy Cities initiative promotes inclusive, safe, and health-centred urban environments, on the premises that healthy built environments are instrumental in making healthy communities who would contribute to the socio-economic development of a nation. However, the widely practiced means and ways of the Healthy Cities around the world remain less explored for their success in developing countries such as Sri Lanka. This study investigates the relevance and contribution of the public parks and open recreation spaces, which is an important attribute of the WHO-advocated Healthy Cities, in achieving healthy communities in the Sri Lankan context. The study has focused on the Greater Galle area in Southern Sri Lanka. Framing within Maslow's Hierarchy of Human Needs, the study employed a mixed-methods approach, including statistical interpretations of the socio-economic status of the communities, ground observations on the use of open recreation spaces, and in-depth interviews with the users, to explore the contribution of public recreation spaces towards improving the health of the community in the area. Comparing the socioeconomic profiles of the resident community in the area with those of the users of parks and recreation spaces, the study reveals a significant disconnect between the Healthy City ideals and on-ground realities, where access to health-promoting infrastructure is disproportionate and skewed toward higher-income groups. This highlights the need for a more context-specific, community-sensitive, and equity-focused approach to planning healthy cities.

Keywords: *Healthy Cities, Parks and Open Recreation Spaces, Maslow's Hierarchy of Needs*

1. Introduction

At the dawn of this century, more than half the world's population lived in cities, and this is projected to increase to 70% by 2050 (UN-Habitat, 2007). Planning of urban areas, especially in the post-industrial era, has been associated with the nuances of healthy built environments that result in healthy communities. Thus, public health has always been at the centre of the ideal city in the West (Ebikeme & Ebikeme, 2019), and public recreation spaces have, throughout, been seen as instrumental in upbringing public health. Yet, critiques against this 'physical determinism' backed ideology show that cities today face more critical challenges such as growing income inequalities, decreasing affordability of the low- and meddle-income earners, homelessness, environmental degradation, climate change impacts, etc., which have serious impacts on public health (Leeuw, 2012) and which cannot be addressed with physical provisions alone such as parks and recreation spaces.

However, since mental and environmental health are currently of concern in the public eye, the idea of healthy cities has not lost its importance in planning and urban development discourse. Cities serve as centres of opportunities to which populations are attracted, emphasizing the need to provide environments that facilitate healthy lives. On the premise that healthy communities are instrumental in making healthy economies, built environments that facilitate health is considered important for the economic development of a nation.

Initiated by the Regional Office for Europe of the World Health Organization (WHO), 'Healthy Cities' is a program that intends to address physical, mental, and environmental health concerns in cities and urban areas (World Health Organization Regional Office for Europe, 1987). It advocates for a wide array of prerequisites such as laws and policies that guarantee social inclusion, access to healthcare, clean air, and infrastructure that encourage active lifestyles of the inhabitants. The concept has been integrated into planning and urban development processes in numerous cities across the globe (Dooris, 1999). However, the generalized framework for Healthy Cities often seems to assume that all cities can implement similar health-oriented planning and urban design strategies regardless of their unique socio-economic and cultural situations. Thus, even though the commonly adopted measures have proven useful in particular situations, their generalizability is still up for debate. Their implementation in cities in developing countries, where economic instability, rapid unplanned urbanization, and governance issues dominate, is not as smooth as in developed nations (E. D. E. Leeuw, 2009). Hence, the WHO's widely practiced method of delivery of healthy cities remains questionable in developing countries such as Sri Lanka.

WHO admits that despite advocating for policies that guarantee social inclusion, access to clean air, and active lifestyles,

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the Healthy Cities concept relies heavily on governance, economic stability, and resource availability to work (WHO, 1987).

In that context, to what extent the counties with weak governance structures, poor infrastructure quality, and income inequalities can succeed in becoming Healthy Cities is not well explored (E. De Leeuw, 2013). In this background, this study makes a case for a localized strategy that considers urban challenges, particular to Sri Lanka, as a developing nation with its own socio-cultural uniqueness, rather than uncritically adopting widely practiced strategies towards building health-promoting environments in its urban areas.

Growing socioeconomic disparities, environmental degradation, and poor infrastructure in many Sri Lankan urban areas pose numerous challenges to their inhabitants' well-being. At the same time, downsizing epidemics and common medical necessities, non-communicable diseases have been reported to be increasing over the past decades, attributed to inadequate physical activities, unhealthy lifestyles, and changing food habits. In this light, public open spaces, parks, and other public recreation areas are commonly proposed as a vital infrastructure in a healthy city, which can play an important role in the prevention of non-communicable diseases. They are also an important resource that can help people improve their mental health through walking, socializing, and engaging in team activities (Kruger, 2008). Outdoor physical activities provide people with a way to connect with people and also with nature. Therefore, the study has focused on parks and open recreation spaces for their role in promoting healthy lifestyles in communities in Sri Lanka, with a specific focus on the city of Galle and its surroundings, which is designated as Greater Galle (Urban Development Authority, 2019).

2. Literature review

The Healthy Cities initiative, launched in 1986, promoted cities to continuously improve their physical and social environments while expanding resources supporting community well-being. This approach emphasizes that urban health is shaped not only by healthcare services but also by factors such as housing, transportation, environmental quality, and social inclusion. According to the WHO (1998), "*A healthy city was defined as one that continuously improves physical and social environments while expanding resources that support community well-being."* The initiative encouraged local governments to integrate health considerations into all aspects of urban planning and policy, fostering community participation and collaboration among sectors to create healthier living conditions for all residents (World Health Organization, 1998).

Healthy Cities projects around the globe adopted the principles of inter-sectoral policy, community participation, and "health in all policies" to contexts as varied as Barcelona's integrated local health plans, Copenhagen's active transport strategies, and African and Asian pilot programs that combine environmental improvements with community-based interventions (Kickbusch, 2003; Barton & Grant, 2006).

A growing body of research links urban built environments directly to public health outcomes. Many studies have associated features of healthy communities, such as physical and mental health and reduced risk of non-communicable diseases, with the characteristics of healthy cities. For example, studies have examined and established links between housing quality and respiratory and mental health outcomes (Frank et al., 2004), residential density and active travel and reduced car dependency (Ewing & Cervero, 2010), land use diversity and increased physical activity and access to services (Frank et al., 2005), walkability and lower obesity prevalence and cardiovascular health (Sallis et al., 2016), access to green spaces and improved mental well-being and reduced mortality (Maas et al., 2006), and public transport availability and increased physical activity and social equity (Badland & Schofield, 2005). Urban design and transport policies have also been studied as influencing air quality, injury risk, social cohesion, and accessibility of health-promoting resources, factors that shape population health in both direct and indirect ways (Rydin et al., 2012; WHO, 1998). WHO's Healthy Cities framework builds on these connections, promoting built environments that encourage active lifestyles, improved environmental quality, and strengthened social networks (WHO, 2025).

Although Sri Lanka has not widely implemented the WHO Healthy Cities model, Jaffna was selected in 2019 as a pilot under the WHO "Healthy Settings" approach, making it one of the earliest South Asian cities to adopt health-promoting environmental strategies. The WHO-supported Programme introduced school-based interventions, including improved WASH facilities, menstrual hygiene management, and zero-plastic waste reduction initiatives (WHO Regional Office for South-East Asia, 2020). In workplaces, the initiative promoted governance structures that encourage employee well-being and healthy behavioral choices, while in public spaces, it advanced community-level waste management reforms and opportunities for physical activity across age groups (UNICEF Sri Lanka, 2021). The Jaffna experience demonstrates the potential for localized adaptation of Healthy City principles within Sri Lanka's socio-economic context - particularly in a post-conflict urban environment characterized by resource constraints and governance challenges. Beyond this initiative, other Sri Lankan cities such as Colombo, Galle, Bentota, and Nuwara Eliya have been informally associated with health-supportive environments due to their wellness facilities, clean air, or walkable urban form. The limited national adoption of Healthy Cities frameworks further reinforces the need for contextualized, place-based assessments such as the present study.

Literature has shown that the WHO proposal has both notable strengths and limitations. Kickbusch (2003) and De Leeuw (2017) show that the holistic framing integrates social determinants of health with cross-sector action, empowering local governments and communities to collaborate on solutions. It is adaptable in different contexts, making it compatible with the Sustainable Development Goals and other policy agendas (WHO, 2016). However, Hancock & Duhl (1986) and De Leeuw (2009) see that its effectiveness depends heavily on local governance capacity, funding, and political commitment. Evaluations often report process-related achievements, such as partnerships and increased awareness, but show mixed evidence on long-term health outcomes. Without deliberate equity mechanisms, benefits risk favoring more advantaged neighborhoods, potentially widening health gaps.

Birley and Lock (1998) warn that the initiative's rhetoric can depoliticize urban health, diverting attention from structural inequalities and broadening political-economic drivers of poor health. Ebikeme and Ebikeme (2022) have also shown that Healthy Cities was largely shaped by contexts in the Global North, where strong local governments could effectively implement urban health policies, even though the concept was meant to be universal. In the Western urban planning context, the concept of an ideal city has always been closely linked with public health. Throughout history, city designs have prioritized sanitation, access to clean water, proper waste management, and overall living conditions to promote residents' well-being. In contrast, many cities in the Global South face weaker local governance, limited resources, and a high prevalence of informal settlements, making it difficult to apply the same strategies. In these areas, state intervention in service provision and regulation is often minimal, limiting the program's effectiveness. (Ebikeme and Ebikeme, 2022).

Exploring the relationship between public health and socio-economic status, Marmot (2005) and Wilkinson & Pickett (2009) showed that lower socio-economic status was associated with worse health outcomes, driven by factors such as poorer housing, reduced access to services, higher exposure to environmental hazards, and barriers to adopting health-promoting behaviors. In many developing economies, the realities of poverty mean that basic needs, shelter, and safety often take precedence over preventive health measures. Thus, the literature shows that there is a knowledge gap between the ideal applications of the Healthy Cities model and its adoptability in developing countries under the imperfect socio-economic conditions deep-rooted in them.

Despite more than three decades of WHO Healthy Cities work, important knowledge gaps remain. Longitudinal evidence directly linking Healthy Cities programs to measurable changes in population-level morbidity and mortality is scarce, and there is a lack of equity-focused evaluations that examine whether interventions reduce or exacerbate health inequalities. Few studies (e.g.: Harpham, 2009; Akerman et al., 2011; Corburn & Riley, 2012; De Leeuw, 2017) have explored how the Healthy Cities framework can be adopted, financed, and sustained in resource-constrained settings, particularly in Sub-Saharan Africa and South Asia. Comparative research on governance arrangements, such as legal mandates, participatory platforms, and financing models, is limited. So as the economic evaluations, assessing the cost-effectiveness of multi-sector interventions. Addressing these gaps would strengthen the evidence base and guide more effective, equitable, and sustainable implementation of healthy cities worldwide.

In the fields of spatial planning and urban design, research hypothesized that the built environment strongly influences health outcomes. Studies attempted to establish that walkable, mixed-use neighborhoods are linked to higher physical activity and lower obesity rates (Saelens, Sallis, & Frank, 2003; Sallis et al., 2016); compact, transit-oriented development has been shown to reduce air pollution and related health risks (Ewing & Cervero, 2010; Giles-Corti et al., 2016); access to green spaces improves mental well-being and lowers stress, with evidence also pointing to reduced mortality rates (Maas et al., 2006; James et al., 2015). Their findings highlight the central role of planning and urban design in promoting healthier urban living.

3. Theoretical Framework

The WHO Healthy Cities framework is a globally recognized basis for urban health analysis, widely applied by researchers, planners, and policymakers. It is generally accepted that aligning with the WHO framework ensures compatibility with international best practices in promoting sustainable and healthy urban environments.

However, strategies to promote inhabitants' health through passive measures, such as parks for leisure, specific spaces for recreation activities, designated places for socializing, etc., will be less effective unless the inhabitants are able and prepared to exploit them. In this regard, Maslow's Hierarchy of human needs explains that individuals prioritize basic needs such as food, shelter, and safety before seeking and engaging with higher-level socio-spatial development opportunities, such as Healthy Cities (Zhai et al., 2023). Thus, the research recognizes that structural and cultural conditions must support the fulfillment of basic needs for Healthy City attributes to be fully effective.

Maslow's hierarchy of needs provides a useful heuristic for understanding why health promotion messages may have limited impact when populations are focused on meeting more immediate survival needs (Figure 1). According to Maslow, human needs are structured in a hierarchy, beginning with physiological needs (food, water, shelter). Only after these

fundamental needs are met do people focus on higher-level needs, such as health, well-being, and self-actualization (McLeod, 2025).

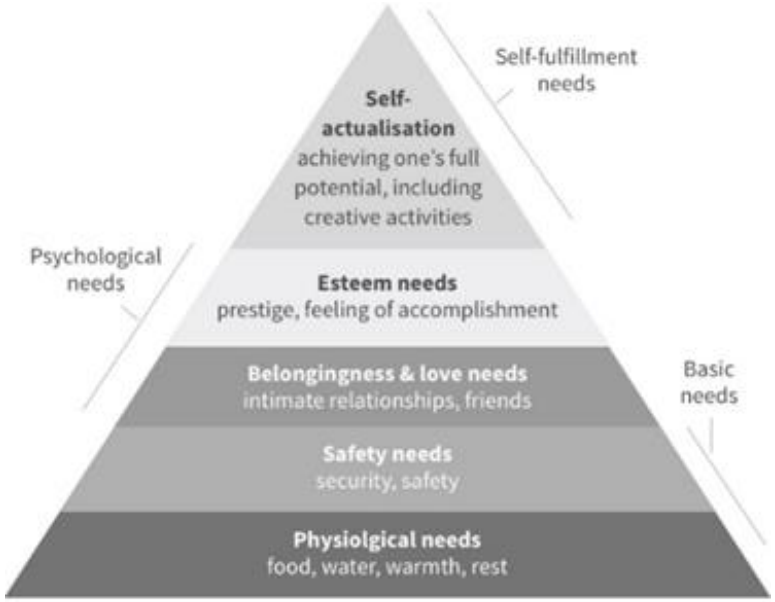

Figure 1: Maslow's Hierarchy of Needs
(Source: Maslow's Hierarchy of Needs: Psychology Myth Busting - Mr Joe Leech)

Due to economic instability, growing living expenses, and a lack of employment opportunities and underemployment, populations in developing countries, particularly those in low-income groups, may find it difficult to meet their basic survival needs (McLeod, 2025). As a result, healthcare and preventive health measures may be given less priority than the need for everyday survival in the allocation of resources and time. When formulating urban health policies, healthy cities efforts need to take economic situations and socio-cultural aspects into account, as is reflected by Maslow's theory on the hierarchical arrangement of human needs. Without addressing affordability and availability, health-promoting initiatives may not be successful if people have difficulties in meeting their fundamental needs.

As per Maslow's human needs framework, the socio-economic conditions are imperative in promoting the ability and preparedness to use. In such situations, intuitive measures such as essential walking for day-to-day activities in safe and pleasant walkways, unintentional engagement in light exercises such as climbing steps, socializing possibilities at everyday spaces such as transport exits, market spaces, etc., are likely to provide communities with better opportunities to improve their health.

4. The Study Approach

The objective of this study, thus, is to examine the relevance and suitability of the popularly advocated and currently widely practiced attributes of the Healthy Cities model within the Sri Lankan context. For this purpose, this study investigates the relevance and suitability of the parks and public recreation spaces, which are a popularly advocated and currently widely adopted attribute of the Healthy Cities model, in the Sri Lankan context, based on the aforementioned human needs-based framework. However, the study has not focused on the potential causative relationships, i.e., specific benefits of the use of parks and recreation spaces on personal health indicators of the users, such as longevity, body mass index, physical fitness, etc., due to the sensitivity and the non-accessibility to such information. Rather, it has focused on the level of the 'utility' of the healthy city facilities provided by the authorities with the intention of promoting healthy inhabitants.

The research, therefore, revolves around questioning the extent to which the passive urban design strategies, such as providing designated public parks and recreational spaces, serve the objective of fostering the health and well-being of a wider public in a local area. To that end, the study adopts a comparative analysis approach, examining the socio-economic status of the wider local community against the socio-economic profile of the actual users of selected public recreation spaces in the Greater Galle area. Thus, the three main units under the observations are: (1) the socio-economic profile of the overall population in the study area; (2) the level of utility of the selected public parks and recreational spaces; and (3) the socio-economic status of the users of those parks and recreational spaces. These variables directly address the study objective, evaluating the alignment between the intended beneficiaries of Healthy City attributes and the actual users. By comparing these, the study reveals the potential mismatches between planning vision and the social reality. The study emphasizes the need for more inclusive urban design strategies that will assure healthy cities' benefits for a wider segment of the community.

5. The Study Process

This study was conducted solely for academic purposes as part of the author's final year undergraduate research. Before fieldwork, an official letter issued by the Department of Town & Country Planning, University of Moratuwa, was used to inform participants and local authorities that the data were collected only for academic analysis. Administrative permission was obtained informally by presenting this letter to relevant local officials and site managers when entering public parks. During interviews, all participants were clearly briefed about the purpose of the study.

The city of Galle is situated in Southern Sri Lanka, 118 km from Colombo. Galle has been dominating the Southern Province from the times of colonial rule (17th Century) in the public administration, trade and commerce, and tourism. According to the 2023 census, the population of the Galle Municipal Council was 112,250, and the urban activities have now spread into a larger hinterland, including the local areas (Divisional Secretariat Divisions) of Galle Gravets, Karapitiya, and Poddala, which is identified by the Urban Development Authority (UDA) as the Greater Galle Urban Development Area. The same census recorded a total population of 190,500 in the Greater Galle Development area and represents a diverse mix of urban, suburban, and peri-urban environments, allowing for a comprehensive assessment of how urban planning influences public health across different settings. The Galle City core area serves as the commercial and administrative hub, while Karapitiya is now a densely developed area with major healthcare facilities. Bope-Poddala is a rapidly developing suburban area with a large number of residential units.

For component (1) of the study, the socio-economic status of the inhabitants of the study area has been evaluated as available in the *Resource Profile* of the four DS Divisions-2023. The Galle Gravets (Core area) is a socially and economically diverse urban environment where income disparities, housing conditions, and access to public infrastructure vary significantly between neighborhoods. A substantial proportion of households (over 40%) earned below Rs. 25,000 per month, while a middle-income earning group (Average Rs. 100,000 a month) dominated all three areas.

The Galle city area is dominated by higher-income residents and visitors. Galle Gravets serves as the administrative and commercial hub of the district. Here, residents are largely engaged in trade, tourism, port-related services, government jobs, and formal employment. Housing is dense, with a mix of well-constructed permanent houses, old townhouses, and rental units, while demand for apartments and boarding facilities is high due to tourism and student inflows. Income disparities are most visible in this area, ranging from very low-income households (around 30% earning less than Rs. 2,500 per month) in older neighborhoods to affluent residents and business owners (around 10% who earned more than Rs. 250,000 a month) in Galle Fort and central zones.

Karapitiya is a densely developed urban area dominated by the Karapitiya Teaching Hospital, with many households engaged in healthcare, education, and related services. Housing consists of compact permanent houses, rented units for health-sector workers, and newer apartments, though land scarcity and high rental costs pose challenges. The majority of household income comes from salaried employment in the hospital and public service, along with small-scale trade and services, while unemployment remains moderate, but youth unemployment is visible.

Bope-Poddala is a transforming suburban area where housing mainly consists of detached single-family dwellings and semi-permanent units, with many households gradually upgrading homes over time. For the majority of households, livelihoods depended on daily wage labor, construction work, small-scale trade, agriculture, and significant remittances from foreign employment. Employment is more informal in nature, with higher rates of underemployment and seasonal variation. Household incomes are generally lower than in Karapitiya. Access to piped born water and sanitation is less consistent (Resource Profile, 2023).

All three cities fall within a 10 km radius of the Galle urban core and were therefore the most practical locations for field observation and interviewing within the available time frame. This ensured both spatial relevance and logistical feasibility when stratifying the sample across the different park catchments.

To study component (2), the study has selected 03 public recreation spaces. They are Galle Fort and Darmapala Park (Galle city), Serene River Park (Bope-Poddala), and Karapitiya Open Space (Karapitiya). The authors visited these spaces on 02 weekdays and 02 weekend days over December 2024 and January to April 2025. The observations were made from 7.00 am to 7.00 pm on each day.

For component (3), 50 visitors from Galle's central business district (CBD) and 20 each from Serene River Park (Poddala) and Karapitiya open spaces have been interviewed to obtain information on their income levels, housing conditions, mobility levels, and other lifestyle-related features. For this study, the focus was exploratory and comparative rather than on estimating precise population parameters. We aimed to reach a reasonable number of users in each park so that key patterns in socio-economic characteristics and park use would become clear. A total of 90 interviews were completed (50 in the main city park and 20 in each of the two smaller suburban/peri-urban parks). During fieldwork, we observed that after about 15-20 interviews per site, responses began to repeat, and no major new patterns emerged, suggesting that the sample was

sufficient for the study's objectives. Practical constraints such as time, access, and respondent availability also influenced the final number.

The interviewees were randomly selected and approached with their consent to take part in the interview. In each location, individuals were approached based on a pre-defined interval - such as every 5th visitor passing a point or entering the park - rather than based on the interviewer's personal judgement. A majority of the selected visitors showed no objections to taking part and providing information. The interviews took place in the form of open discussions, and the queries were related to their occupations, household details, types and conditions of their residences, vehicle ownership, sources of income, expenditure patterns, mobility, and frequency and the purpose of visiting this or other parks and recreation spaces.

A structured questionnaire was used to guide all interviews. The questionnaire included fixed questions on park distance from home, frequency and time of visits, activities engaged in, perceived safety, income level, mode of transport, and perceptions of the park's physical condition. These structured questions were followed by brief open-ended prompts to allow respondents to elaborate on their experiences. This ensured that each participant was asked the same core questions while also enabling qualitative insights.

All interviews were conducted face-to-face by the researcher. Responses were documented through detailed note-taking, and with participant permission, audio recordings were made to ensure accuracy. The combination of written notes and recordings enabled reliable transcription and cross-checking during analysis.

Interview consistency was ensured through several measures. First, the same structured questionnaire was used for every participant, maintaining uniformity in question order and content. Second, all interviews were conducted by the same interviewer, reducing variability in delivery, explanation, and interpretation. Third, the same observational protocol was used during field visits to record environmental conditions, visitor activity patterns, and park usage. These measures ensured reliability and comparability of data across all sites.

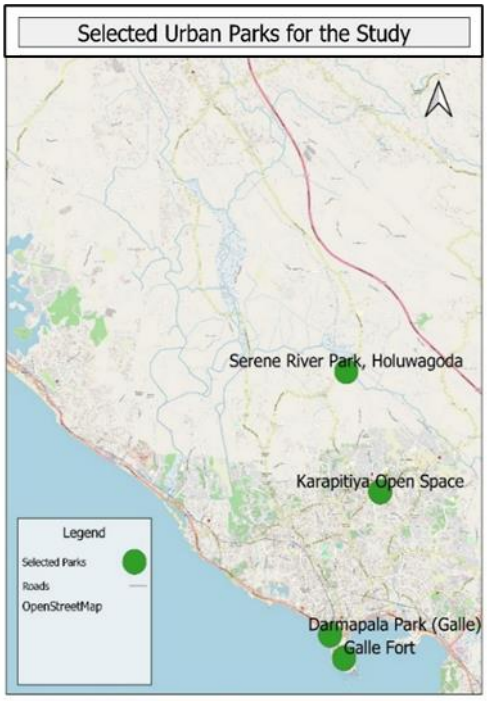

Figure 2 – Selected Urban Parks for the Study

By comparing the said features that reflected the socio-economic profiles of these actual users of the said spaces with those of the general population in the area, as revealed by statistics, the study examines the degree to which these recreation facilities benefit the wider public of the area for healthy living.

6. Comparative Evaluation of Healthy City Components, Population Profile, and Actual Users

6.1. HOUSEHOLD INCOME PATTERN OF THE VISITORS

Interviews with the park users indicate that most regular users were from the upper-income segment of the households, those earning above Rs. 100,000 per month, while low-income residents represented more than one-third of the households that earned less than Rs. 25,000 a month were not present in any of the parks. In the Galle DS division, 85% of the interviewed park visitors were from households earning more than Rs. 200,000 a month, mainly engaged in professional

occupations (engineers, teachers, medical associates, etc.) or tourists. Similarly, in Poddala, where nearly half the population earns less than Rs. 25,000/, 100% of park users had incomes higher than Rs. 100,000/- and had flexible work schedules. The exception was Karapitiya, where 40% of park visitors were from lower-income groups, but were using the park to spend time until the visitor time of the hospital nearby or other institutions in the vicinity. However, even here, the majority of 60% those who came for recreation and leisure were from wealthier residents. This pattern suggests that the availability of parks alone does not provide equitable usage, especially in communities facing economic hardships.

6.2. HOUSEHOLD INCOME PATTERN OF THE VISITORS

In the Galle DS Division, 83 families live in temporary or unauthorized houses, yet none of the park visitors were from these households. Instead, 75% of park users reported living in completely well-maintained houses, reflecting a strong representation from groups in socially secure and permanent housing. In Poddala, where 17% of the population resides in semi-permanent housing, 70% of park users came from permanent housing units, with no representation from vulnerable housing categories. The exception was Karapitiya, which has a significant mix of rental, semi-permanent, and permanent housing. Here, 40% of park visitors were from semi-permanent or rental units, though the majority (60%) still came from permanent, well-maintained housing. This pattern suggests that temporary or improvised housing residents are consistently absent from park use, highlighting that housing security and stability are key preconditions for leisure participation. The physical status of the house could be an indicator of the economic status of the household, and residents with lower income levels may tend to prioritize spending of their disposable income on day-to-day survival and immediate needs over recreational needs.

6.3. MOBILITY AND SAFETY INDICATORS

Mobility and safety conditions in Galle further explain the disparities in the use of parks and recreation facilities. The Healthy City framework emphasizes safe pedestrian and cycling infrastructure, equitable transport access, and traffic calming measures. Yet, local data in Galle paint a different picture: in 2024, 25 pedestrian fatalities and 8 cyclist deaths were recorded in the area, as evidenced by poor sidewalks, unsafe crossings, and the absence of dedicated cycle lanes. The public transport facility available included public buses, which served throughout the area at a higher frequency than the railway, which is not frequent and not popular for local visits among the inhabitants in the area.

Park users in this study were mostly from high-income backgrounds, those who could afford vehicles and travel to recreational spaces safely. During the discussions, respondents shared details about the modes of transportation used to visit the open spaces. Notably, every household interviewed reported access to at least one private vehicle, even in cases where public transport was used for the actual visit. Among the respondents, 44% traveled by car or van, and 38% traveled by motorbike. Within this group, 4 individuals also owned a car or three-wheeler but chose to use the motorbike for this visit. 18% traveled by three-wheeler. Importantly, no respondents reported using a bus or public transportation to access these spaces.

This suggests that park and recreation space visits in the study area overwhelmingly depend on private vehicles, while active transport (cycling, walking) and public transport (buses) are virtually absent as primary modes of access. Access to parks and open spaces for low-income residents might have been difficult because they relied heavily on walking, cycling, or motorcycles, which exposed them to the said critical, unsafe situations. On the other hand, vehicle ownership is also an indicator of the income level of the household.

7. Interpretation of the Findings With Maslow's Hierarchy of Needs.

Maslow's theory proposes that human needs are arranged in a hierarchy, starting with basic physiological and safety needs, then progressing upward to love and belonging, esteem, and self-actualization. The observed difference in public space usage can be interpreted through this lens:

Vulnerable groups (e.g., low-income earners, unauthorized settlers) may still be struggling to meet their basic needs, such as food, shelter, job security, and personal safety. These individuals are less likely to prioritize leisure, recreation, or regular socializing in specific spaces, which can be regarded as higher-level human needs. Designated public recreation spaces often serve the higher tiers of society, who would prioritize personal health and well-being, and recreation over and above basic needs. When individuals have not secured their basic needs, the likelihood of their using such spaces diminishes significantly. Individuals from stable housing, higher income brackets, and secure employment have already met lower-tier needs, allowing them to access and benefit from public spaces for physical, psychological, and social fulfillment.

Mobility and safety constraints further exacerbate this inequity. Data from Galle's 2024 traffic statistics highlight that pedestrians and cyclists, predominantly from lower-income groups, face the highest rates of fatalities and injuries. Unsafe road conditions, lack of pedestrian infrastructure, and inadequate cycling networks create barriers to safe and equitable use of urban spaces. This reality undermines the Healthy Cities principle of accessibility and safety for all, leaving vulnerable populations excluded from the very initiatives intended to improve their well-being.

Thus, the gap in public space utilization is not associated merely with infrastructure deficiencies but is deeply rooted in socio-economic inequalities, as it was revealed through this study. Addressing socio-economic inequalities requires multi-sectoral interventions that would uplift lower-income groups of society to a point where they can engage in and benefit from shared urban spaces. Until then, truly inclusive planning and urban design strategies that depend heavily on passive measures will be less effective in developing built environments that foster public health and the well-being of a wider community.

8. Conclusion

The findings of this research reveal a clear mismatch between the aspirational goals of the Healthy Cities framework and the lived realities of urban residents in Sri Lanka. While certain public infrastructure, such as public parks and recreational areas, provided in many urban areas in Sri Lanka, including Galle, are disproportionately enjoyed by higher-income groups with secured housing conditions and independent mobility. Field observations showed that while a majority of residents earning lower incomes were less attracted by public recreation spaces, more socially and economically affluent households enjoyed them on a regular basis.

Applying Maslow's Hierarchy of Needs, it becomes evident that many urban residents are still focused on fulfilling basic physical, physiological, and safety needs such as housing, income security, and personal safety. In such contexts, health-promoting amenities like parks or recreational facilities, which address higher-level psychological and self-fulfillment needs, are understandably deprioritized. This suggests that Sri Lanka's healthy cities model requires a paradigm shift from an infrastructure-focused approach to a needs-driven approach that is responsive to socioeconomic realities on the ground. Addressing fundamental issues such as secure housing, mobility safety, and income disparities would create a more equitable foundation for higher-level health and well-being interventions to succeed.

Furthermore, this research finds that even among higher-income users, interaction with health infrastructure is infrequent and largely limited to occasional leisure visits. For the great majority, parks and open spaces, while physically present, are not embedded into daily routines in ways that foster long-term health benefits. This points to a need for urban design that integrates health-supporting features directly into the spaces and paths people use on a daily basis in their everyday life. Shaded pedestrian routes, clean air, and less noisy and traffic-calmed urban districts, pleasant encounters on their way, along with safe pedestrian crossings, hassle-free, evenly paved paths, and grade-separated traffic routes that would ensure the safety and vitality of the urban built environments. Unintentionally climbed steps and ramps, appropriate street furniture, etc., would be alternatives to intentional physical exercises to prevent non-communicable diseases and to promote psychological well-being. Accessible public transport stops, street greenery, informal gathering areas, and reliable sanitation would make urban spaces livable.

The current applications of the Healthy Cities model remain uneven and insufficiently inclusive when it comes to developing countries like Sri Lanka. If the concept is to move beyond symbolic aspiration and into lived reality, planning and urban design shall redefine health equity to prioritize the daily experiences and needs of all citizens, particularly those most at risk of exclusion. Only by bridging the gap between policy vision and the socioeconomic realities on the ground can Sri Lanka create cities that truly promote health for all.

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