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The Concrete Trap: Green Space Deficiency and Its Impact on Urban Health in Dhaka

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Abstract: The research in this study is based on survey evidence from 27 respondents and supplemented with international literature and looks at the effect of green space deficiency on the mental and physical health of Bangladesh residents of Dhaka. The research concludes that even if residents stay a walking distance from parks, they shun them due to neglect, insecurity, and unavailability of facilities. Instead, recreation has the tendency to be pushed to commercial spaces or indoors, with resulting lower physical activity, stress, and worse well-being. Findings indicate that public demand for accessible, safe, and well-maintained green infrastructure is high. The paper concludes by proposing policy suggestions for integrating greenery into the planning of Dhaka city in order to improve health outcomes and livability.

I. INTRODUCTION

The capital of Bangladesh, Dhaka, has emerged as one of the fastest-growing megacities in the world. There is an unprecedented spurt in concrete buildings as urbanization progresses. The growth comes at a fantastic price in terms of natural greenery, and it poses very serious questions about the health and happiness of the people. Scholars argue that access to urban greens greatly helps to alleviate stress, improve the quality of air, and encourage social interaction [5,7]. The absence of it creates space for what can be called a 'concrete trap', where the people are trapped within a increasingly artificial, health-depleting environment. The study examines the multi-dimensional impact of green space insufficiency on urban health in Dhaka. It seeks to acknowledge the effect of limited access to parks, quality parkland, open space, and indigenous vegetation on physical and mental health, especially among children, the elderly, and low-income individuals. Earlier research in urban areas has depicted that children who have wider exposure to green play spaces exhibit improved physical growth and mental ability [5], whereas older people especially gain benefits from strolling and meeting people outdoors [11]. In Dhaka, nevertheless,

if someone wishes to enjoy natural scenery, he/she has to go to the outskirts of the city. For low- and middle-income families, renting a vehicle and booking a full-day outing just for the thrill of basking in vegetation is not practical and costly.

Restaurant settings then become the fallback entertainment option, where families spend substantial amounts on food, even when their main agenda is merely to spend quality time outside. Kids barely have safe opportunities for playing sports, crucial for their development, and the majority end up playing on roadsides, risking injury from accident and inconveniencing commuters. In the same way, elderly people are deprived of spaces to walk, exercise, and socialize — activities found through research to be determinants of active and healthy aging among developed world societies [4]. Overall, the lack of good quality green spaces, paired with rising pollution, heat, and traffic, will likely worsen mental health problems such as anxiety, depression, and stress, and erode city living standards overall in Dhaka. As cities all over the world turn to green infrastructure to mitigate urban health emergencies and enhance resilience [3], this research puts Dhaka into that global context, laying out the opportunities and challenges of more green in the city's grey.

II. METHODOLOGY

This study employed a mixed-method approach to examine how the lack of green parks in Dhaka affects both physical and psychological well-being. The study utilized quantitative data based on structured questions as well as qualitative responses from open-ended questions to achieve breadth and depth of understanding.

Survey design: Two sections were a part of a structured survey. The first section consisted of close-ended questions to obtain quantitative information on visit frequency to the park, journey time, most favored outdoor recreational activities, and self-assessed health condition. The second section comprised open-ended questions where respondents

gave their personal experience and problems on outdoor recreation and access to green spaces.

Sampling and participants: A total of 27 respondents participated, recruited through convenience sampling from the researcher's personal and professional networks. While not representative of the entire Dhaka population, the sample captured a diverse mix of ages (young adults to elderly), occupations (students, service holders, homemakers), and household income groups (low to middle), allowing for varied perspectives.

Data collection: Both online and offline feedback were collected within a two-week window in July 2025 to ensure inclusivity.

Data analysis: Quantitative information were organized in a tabular form with descriptive statistics (percentages and frequencies). Qualitative responses were analyzed thematically, recording recurrent concerns such as safety, climate discomfort, and maintenance shortage. Triangulating both enhanced validity and provided a more balanced understanding of Dhaka's green space problems.

III. RESULTS AND DISCUSSION

Access but Underuse

Although 70% of respondents live within 30 minutes of a park, 100% reported not visiting regularly, instead opting for indoor or commercial alternatives (81% eating out, 67% staying home, 33% visiting friends).

High Latent Demand

A substantial 70.4% of respondents stated they would definitely visit parks if they were accessible and well-maintained, signaling considerable untapped demand for functional green spaces.

Poor Quality and Safety Concerns

63% described present park quality as "very poor," and 22% as "poor."

59% reported harassment or safety issues—most notably, women; 52% complained about lack of lighting or security.

Environmental discouragements were heat (48%), air pollution (44%), and noise/crowding (33%).

Health Impact

74% characterized low physical activity, and 63% attributed this to repeated illness such as fatigue and frequent colds.

59% endured stress, anxiety, or boredom due to limited recreational spaces.

Young children and adolescents are the most impacted, having too much television at home dominating their leisure time.

Community Support for Green Interventions

A staggering 89% also indicated that they would endorse initiatives like developing community parks, green rooftops and walls, child- and elderly-friendly playgrounds, wetlands and riverside conservation, and boosting overall security, cleanliness, and maintenance.

Oxfam Insights

An interview with Oxfam in Bangladesh's Head of Climate Justice & Natural Resource Rights, Dr. Mohammad Emran Hasan, cited the need for urban green infrastructure in building community resilience. Oxfam is increasingly focusing on urban resilience mechanisms, including green infrastructure to enhance community health and mitigate environmental pressures. Although Oxfam programs generally tackle broader climate threats, Dr. Hasan noted that having open, secure, and well-maintained green space within densely populated cities such as Dhaka can have substantial effects on physical and mental well-being, most importantly for disadvantaged populations.

Global Context & Inequalities in Green Space Cooling

Global research shows that cities in the Global South—such as Dhaka—receive far less cooling benefit from green spaces compared to cities in the Global North (around 1.9 °C versus 3.6 °C cooling effect). This shows a common disparity and highlights the need for superior urban greenery to address the challenge of heat stress in densely populated urban environments such as Dhaka.

Collectively, these findings—survey, thematic analysis, Oxfam expert input, and global evidence—depict a uniform picture: nearness is not in itself enough to ensure uptake; safety, beauty, and perceived benefit are the deciding factors. Additionally, the urban green infrastructure's climate mitigation capacity remains hugely under-realized in Dhaka.

IV. POLICY RECOMMENDATIONS

To turn around the acute shortage and underutilization of green space in Dhaka, city planners, private sectors, and civil society organizations need to adopt a multi-level approach founded on equity, safety, and sustainability. Informed by survey results, Oxfam observations, and global best practices in urban resilience, the following policy measures are recommended:

Green Infrastructure in Urban Planning

- Require all new residential and commercial construction to include accessible, child- and elderly-friendly parks within walking distance.
- Include zoning codes that maintain existing green spaces and enhance their utilization as public parks, particularly in impoverished communities.

Foster Vertical and Roof Top Greening

Adopt policies mandating green roofs and vertical garden spaces for new buildings, both to optimize vegetation cover and alleviate heat stress.

Provide tax incentives and subsidies for residents and builders for such green architecture.

Community-Based Parks and Recreation Centers

- Develop parks with accessible facilities (playgrounds, shaded picnic spots, walking paths, exercise stations) for all age groups.
- Make citizen participation in park planning to ensure the needs of the community, especially women, children, and the elderly.

Safety, Maintenance, and Governance

Establish public-private partnerships (PPPs) for park maintenance, with NGOs, local companies, and citizens' associations collectively maintaining the parks.

Improve safety with improved lighting, security patrols, and CCTV to address harassment concerns and encourage greater use by women and families.

Climate Resilience and Environmental Integration

- [1] Set aside and renew wetlands, riverbanks, and abandoned areas as green corridors, improving biodiversity and open space for recreation.
- [2] Make green space programs part of climate adaptation plans, recognizing the city greenery's role in reducing city heat and pollution.

Awareness, Engagement, and Equity

Organize city-wide public campaigns regarding the physical and mental well-being benefits of parks through community centers, schools, and media.

Promote community activities and green festivals in parks so that their utilization becomes a normality as secure, social spaces.

Ensure equal provision so that low- and middle-income households—who are hardest hit by the lack of green spaces—are provided with affordable recreation spaces.

By incorporating these recommendations into the urban development master plan of Dhaka, policymakers can proceed together to develop public health, social justice, and climate resilience. With current high public desire, an opportunity exists to rethink Dhaka not just as a megacity of concrete but as a city of balanced, sustainable green infrastructure.

V. Conclusion

This study establishes a striking correlation between Dhaka's lack of green spaces and residents' deteriorating physical and mental health. People live apparently next to parks but are dissuaded from utilizing them due to their poor condition, insecurity, and lack of amenities—using them instead to go to

their indoor or commercial alternatives, which also encourages sedentary lifestyle, stress, and morbidity.

Still, Oxfam's strategic emphasis on urban resilience points the way to an under-studied path: green space that is accessible, safe, and well-maintained can be focal infrastructure for climate adaptation as well as for public health in rapidly urbanizing settings. The strong popular demand evidenced green interventions augmented by technical assistance—makes the case compelling. Above all, global evidence proves that expanding vegetation cover in Global South megacities like Dhaka can offer considerable temperature decrease benefits and health benefits—but as long as it is equitably and efficiently achieved. The fact that residents are willing to get involved, if areas were improved, gives a democratic mandate for instant urban greenings. In general, expanding access to secure and accessible green infrastructure is less a beautification process; one must work toward creating healthier, stronger, and more equitable future urbanisms for Dhaka and other megacities of the world.