

POLICY BRIEF

The Paradox of Active Transport: Why Environmental Quality Matters for Health Outcomes in Kibra Informal Settlement, Nairobi, Kenya

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Executive Summary

Active transport, particularly walking and pedaling is widely acknowledged as an essential contributor to community health and sustainable urban mobility (Musau et.al.,2023;Toner et al.,2021).In congested settlements, however, active mobility mostly exists with ecological settings characterized by pollution, exorbitant noise, insufficient infrastructure, inadequate sanitation and environmental distress (World Health Organization[WHO],2024).This conditions yield a critical policy concern pertaining whether the wellness benefits related with active mobility can be fully executed under adverse conditions. This policy brief provides evidence from investigation carried out among 400 Kiberans in Nairobi City in the context of Kenya. The study evaluated the influence of transportation mode health outcomes ,the influence of environmental quality on health outcomes and the moderating influence of environmental quality in the link between transportation mode and health outcomes among residents. The insights indicate that transport mode statistically influenced the health outcomes($\beta=0.769$, $p < 0.001$),whilst environmental quality similarly employs a statistical positive significant influence on health outcomes($\beta=0.559$, $p < 0.001$).The most important aspect being environmental quality significantly moderating the association between transportation mode and subsequent health outcomes ($\beta= 0.061$, $p=0.034$),indicating that environmental factors exert influence to the extent where the involvement of active transport provides to enhanced health.The study demonstrates that environmental quality decline conceals the health benefits related to active mobility, while upgraded environmental quality reinforces the benefits. Therefore ,the policies focusing on the promotion of active mobility in informal set ups should be supported by interventions that aim to improve environmental quality standards. Green healthcare outcomes demand for integrated investment both in environmental service settings and active mobility systems.

The Key Recommendations

1. Development of integrated policies that concurrently enhance promotion of non-motorized transport and elevate ecological quality in the informal settlements.
2. Investment prioritization that integrates mobility infrastructure upgrade with ecological service supply.
3. Ecological conditions improvement that undermines the public well-being benefits related with active mobility.
4. Incorporate environmental quality considerations into active transport planning and urban development initiatives.
5. Support informal settlements in improving the programmes which tend to address the environmental and mobility challenges.

Context: The demand for Transportation and Environmental Policy Integration

Urbanization remains a determinant in transforming major cities in developing countries, with unplanned settlements growing spontaneously (Corburn & Karanja, 2014). Kibra Informal Settlement is among the most thickly settled metropolitan areas in Kenya and has significant difficulties relating to infrastructure, environmental quality, and public health (UN-Habitat, 2020). There are a range of environmental dangers facing residents of Kibra include poor air quality, poor sanitation, garbage build-up, bad smell, noise pollution and environmental discomfort (Ezeh et al., 2017). These factors continue to threaten health and well-being and contribute to greater health inequities across urban contexts.

Meanwhile, active transit continues to be fundamental to daily life in the area. Majority of the residents prefer active mobility particularly Walking and cycling as economical and available mode of transport in the setting. Improved cardiac wellness, reduced chronic diseases risks, healthful living has been linked frequently with active transport (Musau et al., 2023). Moreover the wellness positive outcomes of active mobility are paramount, yet the function of environmental quality in ascertaining these roles in informal settlement settings is not fully fathomed. Impoverished ecological conditions are related to Poor environmental conditions are connected to adverse health effects including diseases outbreaks, diminished quality of life and respiratory disorders (Tran et al., 2023; Prüss-Ustün et al., 2017). Nevertheless, inadequate empirical data empirical information occurs on the influence of environmental integrity on the relationship between travelling modes and the ecological health outcomes.

Understanding this link is vital given that transport and environmental measures are generally handled in isolation. Active transport interventions may therefore not deliver their targeted public health benefits if the environmental circumstances are insufficient. This study provides the evidence needed to develop integrated policy initiatives that have the potential to improve mobility and health outcomes in informal settlements.

Key Issues and Challenges

1. Active Transport Reliance

The survey indicated that the primary mode of mobility for Kibra people is active transport. The most popular mode was walking (52.5 per cent of respondents) followed by cycling (16.3 per cent). More than half of respondents reported walking for over fifty minutes in the past week.

These results suggest that walking and cycling are not just are not simply choices of travel mode but are part of daily mobility. Thus, any factor influencing active transport is likely to have major public health consequences.

2. Poor Environmental Quality

The survey revealed that people face serious environmental issues in their everyday travel. Respondents often had to deal with nasty smells, poor air quality, traffic noise and environmental discomfort.

These environmental conditions are indicative of the larger environmental problems that are common in many informal communities. These situations not only diminish quality of life but also offer health hazards to individuals that may outweigh the benefits of physical mobility.

3. Environmental Health Risks

The results showed common concerns of respiratory problems, headaches, exhaustion and poor overall health among the locals. The respondents mentioned that environmental factors are a key contributor to these health problems.

A combination of reliance on active travel and a degraded environment produces a complex public health problem. “People walk and cycle as a way of getting around but they’re often doing so in environments that are not good for their health.

4. The Active Transportation Paradox

The main problem that arises from the study is what can be called the active transport conundrum. Physical activity is often related with good health. However, active movement in informal settlements is often performed in contexts with environmental dangers which can dampen these health benefits.

This contradiction poses major policy challenges about how municipal authorities might optimize the health advantages associated with active transport while managing environmental dangers.

Policy Recommendations

1. Integrate transport and environmental policies

The results suggest a combined effect of the travel mode and the environmental quality on the health outcomes. Isolated initiatives that focus only on promoting transportation are not enough for municipal and county administrations. There is a need for integrated strategies that promote active transport and environmental quality at the same time in informal communities.

2. Invest in a combined way in transport infrastructure and provision of environmental services

The study provides evidence that health outcomes are influenced by both travel mode and environmental quality. Hence, investment should be centred on transport infrastructure and environmental services. The policy active involvement should detect that the improvement of transport structures independently might not contribute to optimal health impacts in the existence of degraded environmental conditions

3. Enhance Environmental Quality to Achieve Maximum Health Benefits

Environmental quality was found to have a significant effect on health outcomes and to improve the positive effects of transport mode. Improving the environment is therefore an important strategy for improving public health. Active transport health benefits can be increased by reduction of environmental dangers and improvement of ambient conditions.

4. Support informal settlement upgrading programmes .

The results indicate that upgrading programmes should not concentrate only on improving physical infrastructure. Interventions to reinforce active transportation should involve ecological quality improvement and upgrading measures. The combined interventions are likely to yield in enhanced well-being outcomes than isolated investments.

5. Developing sustainable health results using holistic planning initiatives.

The study indicates that to enable achievement of sustainable health societal impact, the allocation of environmental services and transport infrastructure development funding should be conducted concurrently. Urban development planning must consequently acknowledge the interrelated nature of mobility, environmental quality and health consequences. Integrated planning approaches can contribute to the sustainability and health of informal settlements.

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