

The model street method: considering its suitability beyond poverty and sustainability into post-conflict settings

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Submitted: April 2024

Accepted: June 2024

Published: August 2024

Citation: Grierson and Mastruk, The model street method: considering its suitability beyond poverty and sustainability into post-conflict settings, *South Sudan Medical Journal*, 2024;17(3):103-107 © 2024 The Author (s) **License:** This is an open access article under [CC BY-NC](https://creativecommons.org/licenses/by-nc/4.0/) DOI: <https://dx.doi.org/10.4314/ssmj.v17i3.2>

ABSTRACT

Introduction: The model street method was developed in 2015 to provide a framework for delivering high-impact, low-cost, scalable community health interventions for communities affected by poverty in Africa. Since then, the method has been adapted to other contexts, including sustainable redevelopment of urban areas in Europe and North America. Therefore, the suitability of the model as a template from which other contexts could benefit should be considered. Post-conflict settings have several features in common with poverty settings, where this model has been well demonstrated as effective.

Method: The method involves physically transforming a community through improved neighbourhood infrastructure and design. The aim is to improve the physical and psychological wellbeing of the residents. In its flagship project, residents of the deprived neighbourhood Dandora (Kenya) achieved a significantly improved quality of life. The project was delivered over six stages across 18 months. These stages included field research, collaboration laboratories, community workshops, building parties, implementation, and launch.

Results: Key success measures included improvements in perceived safety and security of residents, and better livelihood opportunities, relationships with authorities, play opportunities for children, and drainage and environmental quality. The results achieved recognition in several international awards. The method has since been applied to other neighbourhoods in comparable settings, such as Cape Town, Accra, and Kampala. It has also been adapted successfully to settings other than poverty alleviation, including its use in Europe and North America.

Conclusion: As a community health intervention method, it is low-cost, and its focus on collaboration maximises suitability across a variety of contexts. However, there are unique features specific to post-conflict settings, so it is recommended that the model street methods' suitability for application in post-conflict settings be further considered and investigated.

Keywords: model street method, poverty alleviation, sustainable development, community health, post-conflict wellbeing.

Introduction

In 2015, The Placemakers Netherlands Design Lab commenced a flagship project giving birth to the model street method.^[1] It brought together a variety of actors from academia, community groups, international experts, non-governmental organisations (NGOs) and the private sector, with an aim to develop a sustainable and viable solution to inclusive development and community wellbeing. The project’s focus was a community in Dandora, Nairobi, where serious social challenges were being faced as a result of fast urban growth, high levels of community poverty and unprecedented levels of exposure to pollutants from landfill.^[2] This method has since been applied successfully in several different settings, typically with a focus on poverty alleviation in developing nations, or a focus on accessibility and sustainability in developed nations.^[3] In its demonstrable application across a variety of settings, the model street method has been established as a flexible, low-cost solution for community redevelopment projects to improve wellbeing, and as a suitable framework for wider use.

In this paper, the application of the model street method is considered beyond the contexts of poverty alleviation and sustainable development settings and into post-conflict settings. In this landscape redevelopment is often required on a far larger and more complex scale in support of the recovery and establishment of improved wellbeing for affected communities. An advantage of the model street method is the lower cost compared to the costs of other forms of public investment. The International Monetary Fund quantified the average inefficiency of more commonly applied comparable investments at 30% of the overall project cost.^[4]

Method

Dandora is a low-income neighbourhood located 11km from Nairobi, with a population of 141,885. It is known as East Africa’s largest informal landfill site.^[5] As the main landfill site for the solid waste generated by the city of Nairobi, residents are exposed to the impacts of the improper dumping of solid, hazardous, and medical waste, including disease transmission from rodents and

Table 1. Summary of method stages^[7]

Stage	Description
I. Field Research	Socio-spatial research of public spaces, drafting of inventories.
II. Collaboration Laboratories	International and local experts and community-based organisations selected from field research findings. Representation selected for community.
III. Community Workshops	Shared software design session with community representatives to reimagine public spaces. 26 residents included diversity of gender, age, disability, area of neighbourhood and income.
IV. Building Parties	Community leaders and volunteers began taking action in the community
V. Implementation	Works requiring more specialised or technical support brought forward by the community representatives to project partners for broader implementation and support.
VI. Launch	Official launch on Saturday 14th April 2018.

Table 2. Key focus areas and improvements^[7]

Focus	Outcome
Access	Paving 800m of roads and paths, construction of footpaths, installation of 14 neighbourhood gates (Figures 1, 2, and 3).
Environment	Planting 25 trees (Figure 1), beautification of building facades, artistic painting, courtyards created
Inclusion	Women commissioned for flag making, youth, children, disabled and the elderly involved in design and general cleaning, youth commissioned for art work
Safety	Street lighting, gate lighting, children’s play areas, tyre swings
Sanitation	Clearance of rubbish and drains, creation of new drainage, installation of 13 rubbish bins
Opportunities	Kiosks for businesses
Ongoing	Maintenance planning, maintenance budgeting and maintenance team. Improved social cohesion and community wellbeing measures.



Figure 1. Dandora Walkway Transformation, Nairobi, Kenya (Source: Anna Wien, Project for Public Spaces, 2020)

toxic chemical exposure as well as poor sanitation, lack of access to clean drinking water, disease transmission from rodents and toxic chemical exposure.^[5]

The model street method was developed, and the transformation of Dandora was achieved, through six key stages, as outlined in Table 1. The redevelopment of the street took approximately eighteen months from start to finish. Residents now contribute 100 Kenyan Shillings per month for the ongoing maintenance of the space.

Key Features

Model street developments contain three key features: development, collaboration, and improved wellbeing. Development represented the aim and hypothesis, collaboration was the method through which it was achieved, and improved community wellbeing measures represented the desired result. Redevelopment of a space is always the most visible outcome of each transformation, but outcomes are also key statistics relating to the physical improvements made to a space. Community collaboration and action was critical to ensuring that each development was designed in accordance with the needs of the residents, and that project acceptability was maximised. Wellbeing outcomes were optimised through this involvement and shared responsibility and measured through short-, mid- and longer-term assessments of the community.

Partnerships and funding were also integral to the

success of the project. Initial funding of \$2,000 USD was provided by The International New Town Institute and International Federation for Housing. Other costs (workshops, design, equipment hire, building party costs, public events, maintenance, and project documentation and planning) totalled \$118,558 USD.^[7]

Results

Beyond landfill proximity, Dandora was also affected by high levels of crime, unemployment, youth gang activity, gender inequality, lack of access to education and the effects of the neighbourhood's poor reputation on its residents.^[6] Key focuses and desired outcomes for residents were prioritised, as outlined in Table 2. The initiative succeeded in addressing and improving issues such as crime rate, criminal youth gangs, youth unemployment, urban decay, waste management and poor living environment.^[7]

Key focus areas and improvements made to the neighbourhood were distilled down into five themes reported by residents to have resulted in tangible benefit to them. These were: improved perceived



Figure 2. Dandora Street Before Paving (Source: Anna Wien, Project for Public Spaces, 2020).



Figure 3. Dandora Children Skating (Source: Anna Wien, Project for Public Spaces, 2020).

safety and security, improved livelihood opportunities, improved relationships with authorities, improved play opportunities for children and improved drainage and environmental quality.^[8] Improved relationships between youth, residents and authorities have resulted in collaborations on reclaiming new areas of public space.^[8] The drainage lines that were cleared, opened and installed have had a significant contribution to the environmental health of the neighbourhood.^[8] Overflowing sewers, flash floods and mud were a constant risk to health and vector of disease.^[8]

As a result of the success of this first model street project in 2015, there have been several projects replicated in comparable settings, with similar positive results. These have included 'Open Streets' in Cape Town, Khayelitsha Slum Upgrade in Cape Town, Mmofra Place in Accra and Street Angels Slum Upgrading in Kampala.^[3] Model street initiatives have also been applied with great success in more developed settings, including the Noordwal project in The Netherlands and the 45th Avenue project in New York City.^[9] These focused on addressing traffic, pollution and the improvement of green and more biodiverse public spaces. Local and low-cost community health interventions have also been shown to be of particular value to children, by providing safer, more active, journeys to school, introducing play spaces, tackling air pollution, improving waste management, driving youth participation, promoting improved early childcare environments, advocating urban gardening and reducing malnutrition.

Post-Conflict Context

Another setting to consider is post-conflict zones, where redevelopment is often required at scale. In such settings, whole communities require support to re-establish wellbeing, and budgets and resources are incredibly limited. Post-World War II redevelopment demonstrated that thoughtful planning assists faster recovery from trauma for communities from the wider impacts of war.^[10] Today, according to The Geneva Academy (2023), there are currently 114 active global conflicts including in the Middle East and North Africa (45 active conflicts), Africa (35 active conflicts), Asia (21 active conflicts), Europe (7 active conflicts) and Latin America (6 active conflicts).^[11]

Post-conflict settings are those in which prolonged conflict and active warfare has come to an end, yet tensions and long-term insecurities still exist.^[12] Redevelopment of communities in active conflicts is often impossible due to ongoing risks to safety. Redevelopment in post-conflict

zones however, share many of the same challenges as redevelopment in areas of poverty, such as environmental hazards, safety and security risks, lack of infrastructure, poor sanitation, lack of economic opportunity, poor food production and drinking water access, and poor facilities for children. Like model street redevelopments, post-conflict redevelopments typically focus on four key elements:^[13] security; justice and law enforcement; social and economic wellbeing; and governance and participation.

There are unique challenges to consider specific to post-conflict zones. These include, but are not limited to, the risk to life and health because of escalating tensions or environmental hazards (nuclear, toxins, landmines etc), the specific physical and psychological needs of residents after active warfare (injuries, disabilities, trauma, a return to non-violence, prioritisation of safety and security etc), and the impacts of displacement and poor access to channels of communication for the democratic decision making of communities.

Funding challenges are inevitable in post-conflict settings, but so too in the context of poverty alleviation. The post-conflict context may offer an opportunity to access greater funding as the result of international awareness, support, and charity. Similarly, environmental impacts such as a lack of access to food production space, access to clean drinking water, sanitation, exposure to pollutants and loss of biodiversity common to post-conflict settings are also commonplace in settings of poverty, such as Dandora. The potential for negative impacts because of community redevelopment interventions must also be considered. A risk in post-conflict redevelopment settings is the potential for intergroup conflict, or conflict between communities, as a result of perceived inequality, discrimination, or favouritism.^[14]

Discussion

The model street method has been demonstrated to be successful in its aim of improving the quality of life and wellbeing of residents in its originally trialled setting of Dandora. Since then, its application has been further applied in similar settings of poverty, and achieving similar success, in Cape Town, Accra and Kampala. Further, the model has been adapted to settings in developed nations for the purpose of sustainable redevelopment of urban space, and improving green space access. As a community health intervention, the model street method offers a relatively low cost, yet high impact opportunity. As the method prioritises collaboration in its community-led

approach, the adoption of its output is more likely and more adaptable to a variety of settings. One such setting in need of a scalable, structured solution to community health promotion is that of post-conflict zones. These are areas where active warfare has ceased, allowing the investment back into redevelopment, and where communities need support and assistance on a large and complex scale. The model has the potential to improve livelihood opportunities, relationships with authorities, play opportunities for children, environmental quality and recovery from trauma for communities in post-conflict settings in both the short- and long- term. Care must be taken however to ensure that harmful, unintended consequences such as perceived discrimination or favouritism of individuals or communities, are avoided or minimised.

Conclusion

Model street methods have several features in common. They are community-led; improve wellbeing (mental health, physical health and social cohesion); enhance environments; safety and security; and improve space functionality. The impacts of this are far reaching for the benefit of current and future generations. It is the recommendation of this paper that the model street method is considered within this specific context, as an opportunity for future research in this space.

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