

ENHANCING URBAN TRAFFIC SAFETY IN AFRICA WITH BUS RAPID TRANSPORT
(BRT): THE DYNAMICS OF ROAD USERS, VEHICLES, AND BUILT INFRASTRUCTURE.

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Extended Abstract

Background

Sustainable road safety can be achieved through safe infrastructure design and improvement, good speed management, enforcing vehicle safety standards and traffic laws, ensuring the comfort of users, and the creation of agencies and leadership to regulate road safety schemes and strengthen data systems. Through the understanding of traffic rules and situations, developing and improving skills, changing, and strengthening attitudes, and inducing intrinsic motivations towards risk awareness, personal safety, and the safety of other road users, a good road safety attitude can be developed. United Nations Sustainable Development Goals 3 and 11.2 aimed at providing access to safe, affordable, accessible, and sustainable transport systems for all, improving road safety, notably by expanding public transport with special attention, to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons by 2030 which was adopted in 2016.

Bus Rapid Transport (BRT) is an advanced safe and reliable public road transport solution that can be used to attain public traffic safety through better interactions between users, developed and safe road and transport intelligence infrastructure, and improved buses. BRT can be described as a high-capacity bus-based public transit system that delivers safe, fast, and efficient service using dedicated bus lanes, elevated platforms, and developed terminals or stations. A successful BRT system should have the following basic components: segregated lanes, political will and support, ownership of the system, availability of quality vehicles and effective maintenance, an assessable and convenient ticketing system, easy embarkment, and professional staff. The main purpose of BRT operations is to enhance times-saving and reduce congestion using high occupancy buses and dedicated bus lanes; passenger ride comfort using newer and quality buses, provide convenient boarding through pre-paid boarding and better level station platforms, improve the safety and

health of users by reducing pollutant emissions using quality buses, staff training, and improve terminal and road infrastructure. A BRT road infrastructure is designed for different types of road users, and it includes safe crossings, vehicle-free sidewalks, refuges, overpasses, underpasses, and bicycle and motorcycle lanes.

Aim

This case study was to explore the operations of the BRT systems of Lagos and Johannesburg to ascertain how traffic safety is achieved using BRT systems' road and ICT infrastructure and vehicles by users.

Methods

A semi-structured interviews and observation strategy of interactions between users and BRT facilities were used as the methods on enquiry. Forty participants were picked at random for interviews (Johannesburg 20 and Lagos 20). Data collected included demographic characteristics (age and sex) of subjects, nature of the road (sidewalks, crossing, and time savings), infrastructure (access, waiting room, and pre-boarding ticketing), and quality of buses (safety features, seating capacity, and embarkment). The interview data was transcribed and analyzed using Brown and Clarke (2006) thematic process of analysis and the information obtained through observation were recorded.

Results

The findings from the interview and data generated through observations were integrated to describe the level of achievement of traffic safety by the interactions of users, infrastructure, roads, and buses of BRT systems. The study was important to guide policymakers on effective urban safety traffic policy formulation and subsequent developments.