

Abstract

The world's water resources are running out, and this situation is made worse by how quickly people are populating new areas, particularly in developing nations. This has highlighted the critical requirement for prepared action to manage water resources for sustainable development efficiently. Increasing water demands due to climate change, global pressures from urbanization, the already-existing unsustainable variables, and challenges of water supply systems in urban centres pose a challenge in managing water resource effectively. The purpose of the study was to investigate the implication of urban domestic water supply on human health in Machakos Central Ward, Machakos County. Using a Survey Research Design (SRD) both primary and secondary data was collected by use of questionnaires, face-to-face interviews, photography, use of GIS, authors' observation, and the review of relevant literature in order to (1) document household water supply, (2) determine water quality for the identified categories of households and domestic water supply systems, and (3) Determine how the distribution and coverage of domestic water in a household or home affects the prevalence of water-borne illnesses. The target population was 8,331 households, from which a sample size of 381 respondents was selected. These included households, water vendors and key informants from the Machakos Water and Sewerage Company. Questionnaires (for households and vendors), interview schedules (for water officers and chiefs) and observation schedules were used as instruments for data collection. Data was analysed using Microsoft Excel and Statistical Package for Social Sciences (SPSS) software. The results revealed that the major factors attributed to lower accessibility are shortage of water, high cost of piped water connection, poor coordination, and participation of stakeholders, repairing of old and broken pipes. As a result, nearly half of the dwellers prefer to use alternative sources, exposing them to the risks of water-born diseases