African Veterinary Imaging

Methodological Assessment of Quasi-Experimental Designs in Municipal Water Systems in Uganda,

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Abstract

Municipal water systems in Uganda have been a subject of interest for improving public health outcomes. A comprehensive literature review was conducted using electronic databases such as PubMed and Scopus. Studies published between and were included based on predefined eligibility criteria. The analysis identified a significant proportion (35%) of studies employing interrupted time series designs, which showed mixed results in measuring clinical outcomes. Quasi-experimental designs are commonly used but show inconsistent evidence regarding their effectiveness in assessing municipal water systems' impact on clinical outcomes in agriculture. Future research should prioritise the use of more robust statistical models and longitudinal data collection to enhance methodological rigor. The empirical specification follows $Y = \beta_{0+\beta}^{\rightarrow} p\, X + varepsilon$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *African, Quasi-experimental, Evaluation, Methodology, Water supply, Health impact, Intervention effectiveness*

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