

Assessing Factors Associated with Appropriate Solid Waste Management Among Market Vendors in Minakulu Main Market, Oyam District, Northern Uganda

Onyang Geoffrey

Ms. Akello Anne Ruth

Mr. Ojok Opio Innocent

Abstract

Appropriate Solid waste management (ASWM) remains a major public health and environmental challenge in developing countries, particularly in rural market settings. This study assessed ASWM and the socio-cultural, operational, and administrative factors influencing how market vendors handled solid waste in Minakulu Main Market, Oyam District, Northern Uganda. A cross-sectional study design, employing descriptive and quantitative methods, was adopted to evaluate ASWM and associated factors at a specific point in time. A total of 233 vendors were selected through systematic random sampling. Data was collected using structured questionnaires and analyzed using STATA version 17, applying descriptive statistics and modified Poisson regression.

Findings revealed that while 87.1% of vendors reported managing solid waste, the majority relied on unsafe methods, including open dumping (42.1%) and burning (45.9%), with only 17.2% engaging in waste segregation. Socio-cultural factors such as beliefs and education showed weak associations with SWM behavior. In contrast, operational challenges particularly the lack of waste bins (73.4%), long distances to disposal points, and irregular waste collection significantly hindered safe management of waste. Administrative gaps, including low levels of training (18%) and inadequate policy communication, further constrained compliance. Nevertheless, willingness to improve was high, with 97.9% of respondents expressing interest in future training.

The study concludes that inadequate infrastructure and weak administrative systems are the primary barriers to effective SWM in Minakulu Market. It recommends multisectoral interventions, including provision of appropriate waste infrastructure, capacity building for vendors, and strengthened enforcement of waste management policies. These findings provide valuable evidence to guide local governments, environmental agencies, and development partners in strengthening sustainable solid waste management in rural market contexts.

Keywords: *Assessing Factors Associated, Appropriate Solid Waste Management, Among Market Vendors, Minakulu Main Market, Oyam District, Northern Uganda.*

