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Electronic waste scavenging in sub-Saharan Africa: Implications for electronic waste management

Olurominiye O Ibitayo
Texas Southern University, USA

Using Lagos, Nigeria as a case study this research provides empirical information about the scavenging of obsolete electronic equipment in sub-Saharan Africa. Elements of the study include; investigating the perceptions of e-waste scavengers about the human health and environmental effects of e-waste, the reported levels of the adverse health effects of e-waste on the scavengers and the extent of the use of personal protective equipment (PPE) by the e-waste scavengers. The results show that the scavengers perceived low levels of the toxicity of obsolete electronic equipment not only to human health but also to the environment. For example, more than 90% of the respondents indicated that mercury, chromium, beryllium, cadmium, PCBs and CFCs are “not toxic/not at all toxic” or only “somewhat toxic” to human health or to the environment. Regarding the use of PPE, almost 90 percent of the respondents “never” or only “sometimes” used/wear gloves, goggles, nose masks or overalls. In addition, site observations indicate that many of the scavengers use ineffective PPE such as using plastic bags as nose or face masks or as gloves. Subsequently, more than 70 percent of the respondents reported that they have experienced skin irritation, chest pain, and headache, burning sensation, weakness and cough. Regarding the scavengers’ exposure to e-waste, almost 80 percent of the respondents have been scavenging for at least four years, and about 70 percent spend at least five hours per day on the e-waste landfills. The implications of the study for public policy regarding the management of obsolete electronic equipment are discussed.

Biography

Olurominiye O Ibitayo is working as a Professor in Barbara Jordan-Mickey Leland School of Public Affairs, Texas Southern University, Houston, Texas. He received his PhD in Public Administration at Arizona State University. His research interests are in the areas of environmental and occupational risk assessment/analysis, environmental justice, neighborhood-level research and emergency management. His publications have appeared in reputable journals such as *Risk Analysis*, *Journal of Hazardous Materials*, *Journal of Emergency Management and HortScience*.

ibitayo_oo@tsu.edu

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