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Environmental Knowledge versus Behavioral Practice: A Case Study on Plastic Waste Disposal in Kamburupitiya, Sri Lanka

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Abstract

The unsustainable disposal of plastic and polythene waste constitutes a critical environmental and public health challenge in Sri Lanka. This study investigates the persistent gap between environmental awareness and actual disposal practices among educated households in Kamburupitiya. Using a pre-tested, structured questionnaire, data was collected from 73 households in the Bibulawela area. Analyses employing descriptive statistics and a paired sample t-test revealed a significant dissonance: while 89% of respondents acknowledged the environmental harm of plastics, 74% demonstrated inadequate knowledge of proper disposal methods or lacked access to formal waste management systems. All households generated plastic waste weekly, primarily disposing of it through open burning (67%) and open dumping (16%); only 6% used recycling centers. The paired sample t-test confirmed a statistically significant disparity ($p < 0.05$) between high awareness and the adoption of harmful practices. The study concludes that awareness alone is insufficient to drive behavioral change. Mitigating plastic pollution requires integrated strategies combining targeted public education on practical waste management with substantial investments in accessible and reliable collection and recycling infrastructure.

Keywords: *Plastic waste, Polythene disposal, Environmental awareness, Waste management practices, Household behavior*