Challenges associated with household solid waste management (SWM) during COVID-19 lockdown period: a case of ward 12 Gweru City, Zimbabwe

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Abstract

The research assessed the challenges associated with household solid waste management during COVID-19 lockdown period. A mixed method approach was used triangulating both quantitative and qualitative methods. Ten-percent sample size of 1690 households (target population) participated in the research. Stratified random and purposive sampling methods were used to select the participants. Statistical Package for Social Science (SPSS) version 16 and content analysis were used to analyze the data. Chi-square test was used to test whether education level determines the disposal strategy used during the COVID-19 lockdown period. Research findings demonstrates that compulsive use of personal protection equipment such as masks, spending more time at home, bulk buying, and storage of food has skewed the trend of waste generation resulting in the increase in quantity of waste produced daily. COVID-19 lockdown period resulted in reduced waste collection since waste refuse collectors were not operating during lockdown period leading to illegal dumping and burning of waste. On average amount of waste produced weekly per household level was 73 kg (organic waste 35.2 kg, toxic waste 10 kg, and recyclable waste 26.8 kg). A chi-square p value of 0.35 was obtained, showing that there is a relationship between waste disposal strategy used during COVID-19 lockdown period and level of education of the respondents. The research concludes that COVID-19 has greatly affected waste management strategies from generation, collection, transportation, and disposal. It is recommended that the responsible authorities must prioritize collection of waste during the lockdown period as well as ensuring that waste recyclers and collectors are among the essential service providers during the pandemic.